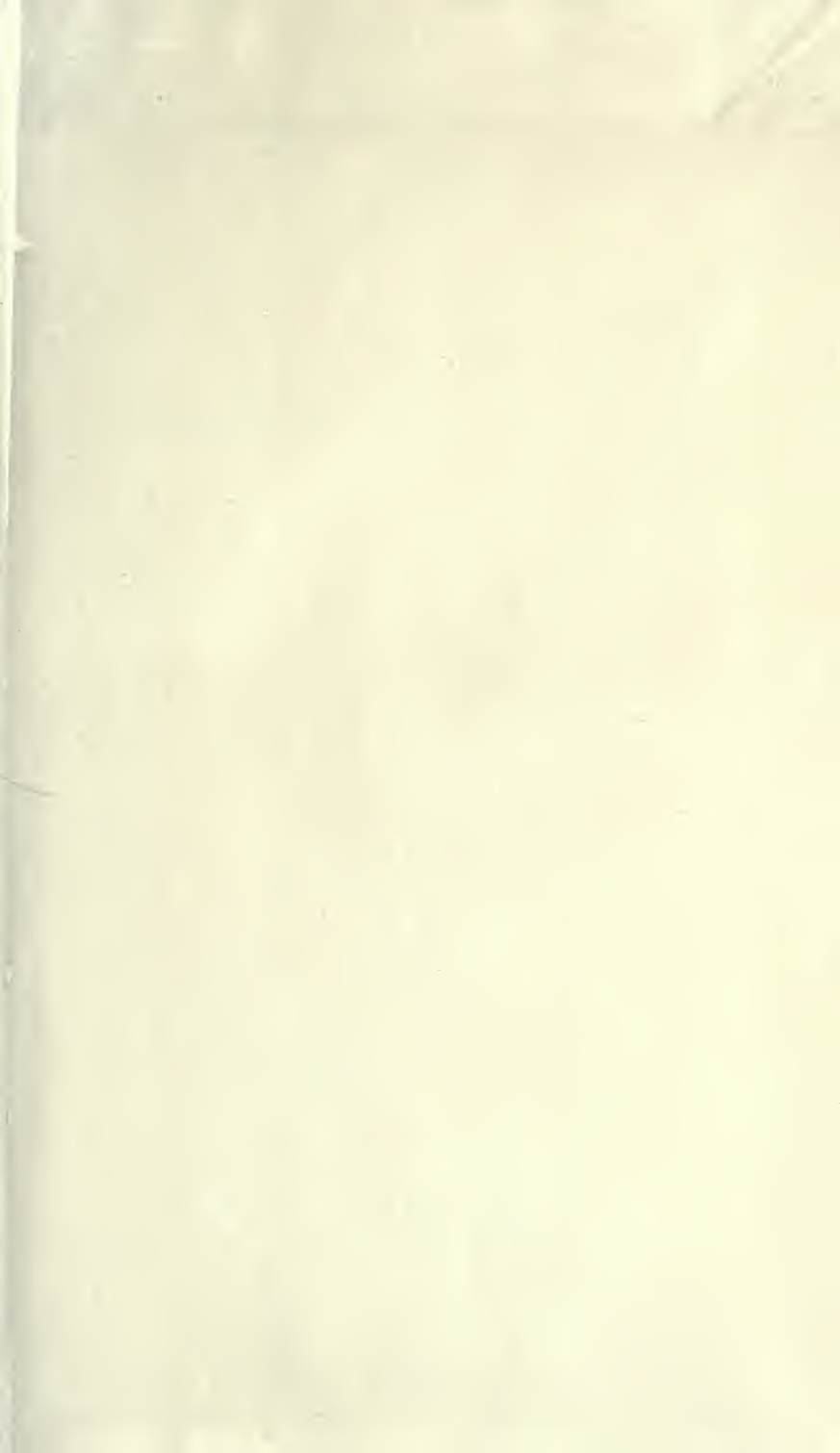


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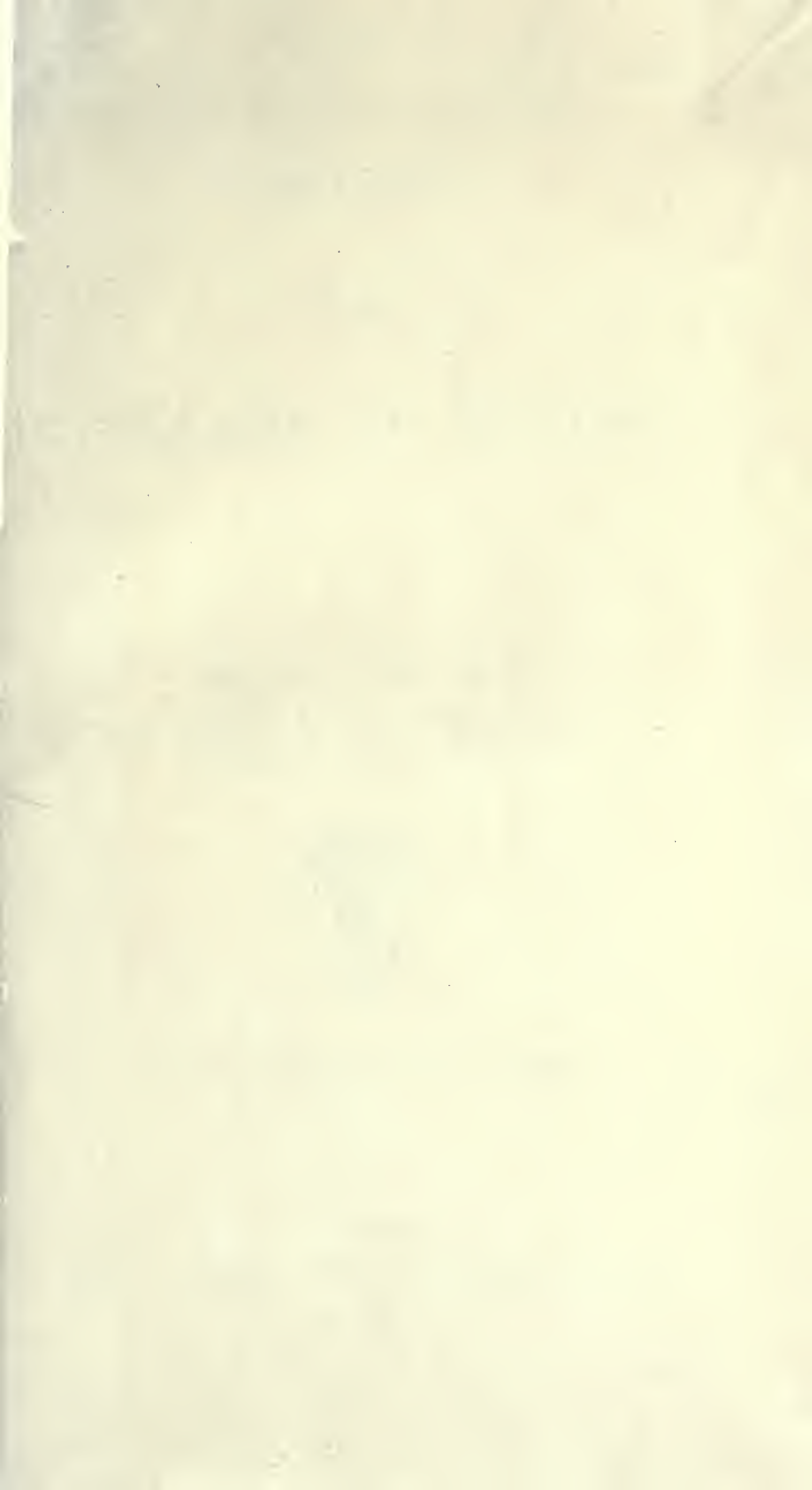
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LECTURES

ON THE

DISEASES OF WOMEN.

BY

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PART I.—DISEASES OF THE UTERUS.

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TO

PETER MERE LATHAM, M.D.

PHYSICIAN EXTRAORDINARY TO THE QUEEN,

AND FORMERLY PHYSICIAN TO ST. BARTHOLOMEW'S HOSPITAL;

WHO FIRST SHOWED ME HOW TO STUDY,

AND HOW TO PRACTISE MEDICINE;

WHO HAS OFTEN GUIDED ME BY HIS ADVICE;

STILL OFTENER TAUGHT ME BY HIS EXAMPLE;

AND WHO SMOOTHED BY HIS UNWEARIED KINDNESS

THE EARLY DIFFICULTIES OF MY CAREER;

TO MY RESPECTED TEACHER, MY GENEROUS FRIEND,

I MOST GRATEFULLY, MOST AFFECTIONATELY,

Dedicate

THIS BOOK.



ADVERTISEMENT.

THESE Lectures are a first instalment towards the discharge of that debt which the opportunities of a hospital and the responsibilities of a teacher impose upon me. A second volume, which will treat of all the remaining diseases of the female system, will appear, if health and strength are spared me, within three years from this time. I have published this part separately, because I believe that students and junior practitioners stand in much need of that help which, with reference to an important class of these ailments, it may perhaps afford them.

To almost all persons there is probably more of pain than of pleasure in looking back upon a work on which much time and labour have been expended ; so wide is in general the distance between the endeavour and its fulfilment. To myself, the consciousness of doubt has often, while engaged upon these Lectures, been very

painful, and the sense of imperfect knowledge has pressed heavily upon me, and does so still.

I commend the book, however, to the kindly judgment of my professional brethren, as embodying the results of ten years of observation in the wards of a hospital, and of the honest attempt to gather from each day's added experience something more or better, for the use of those who look to me for help and guidance.

• 96, WIMPOLE STREET,
April, 1856.

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LECTURE I.

INTRODUCTORY.

Review of subjects already considered in the Lectures on Midwifery—Reasons for having postponed the Study of the Diseases of Women—Two-fold knowledge requisite for their study—Dangers and mistakes arising from want of it—Illustrative cases. Symptoms of these diseases furnished by disturbance of function, alteration of sensibility, and change of texture. Symptoms of first two classes considered.

GENTLEMEN,—Some of you, perhaps, remember that I endeavoured, at the commencement of my Lectures on Midwifery, to point out to you the various respects in which the generative system plays a more important part in the organism of woman than in that of the man. I called your attention to its constantly recurring activity, as displayed in the periodical return of menstruation, to its far-reaching influence as manifested in the various phenomena which attend upon pregnancy and labour, and to the impress which the whole body bears of the special adaptation of every part for the most complete performance of its functions. I pointed out to you, how, as the child grows, the womb grows with it ; how-its lowly organized tissues become developed ; its vessels increase in size ; nerve-matter is deposited within the sheaths, so delicate as to have been almost imperceptible before ; and the uterus becomes at length what old anatomists have not hesitated to call it,—*Miraculum Naturæ*. And next I described to you the means by which all the dangers and the difficulties of parturition are surmounted ; and then told you how all the grand functions of the uterus being thus completed, its tissue undergoes degradation and decay, its vessels shrink, its nerves dwindle to their former size, all the emunc-

tories of the body bearing their part in the removal of the now useless materials; while, at the same time, nature labours to form a new uterus, fitted to go through the same marvellous changes, and answering the same important ends. I entered then into such details, not for the purpose of exciting idle wonder, but in order to lead you to the obvious inference that processes so complicated must be very apt to become disordered; that it must, therefore, be your duty, and ought to be your pleasure, to acquaint yourselves with them and their disorders; that you might learn to know what is healthful, to correct what is contrary to nature, or to render ills that are unavoidable as small as possible. Thus convinced, as I trust, of the importance of the study, you have completed the examination into the physiology of the female sex, in so far as the reproductive processes are concerned, and have inquired, moreover, into the various circumstances by which the generative organs are liable to be disturbed in the performance of their highest functions,—the signs of such disturbance, and the means whereby it may be remedied.

But, as the generative system in woman has functions which it performs independent of those highest offices which it discharges when a germ has been impregnated, and becomes developed to a new being, so their disturbance is not without serious influence on the whole organism. The establishment of the sexual power at puberty, and its extinction with advancing age, both exert important influence on the constitution; at both of these epochs there is an increased liability to disease, and at the former a marked increase in the rate of mortality. All through the time of sexual vigour too, a thousand causes may derange the regular recurrence of the manifestations of its activity, and thereby throw the whole complex machinery of the body into disorder.

The disorders of the sexual functions, then, and the way in which they react on the general health, or are acted on by it, call manifestly for some of your attention; but even when you have familiarized yourselves with them most completely, your

acquaintance with the diseases of women will be but just beginning, for the organs which subserve these functions may be themselves diseased. These organs, too, are complicated in their structure; formed of various tissues, but bound together by sympathies so close that one part cannot be the seat of suffering without all suffering together; and hence it is often no easy task to unravel the tangled web of symptoms, and to find out where the mischief is, and what it is, to which so many manifestations of disease are due.

I have deferred till now, inviting you to enter on the study of these affections, on account of the many difficulties by which it is attended, and on account of the need you will find in pursuing it of that special knowledge which you have acquired while attending lectures on midwifery as well as of that acquaintance with practical medicine which careful observation in the wards of the hospital can alone supply. Knowledge of both of these kinds is equally necessary; the want of the one or of the other is the cause of those two errors into which practitioners not infrequently fall. Some men regard the local ailment as everything; others almost lose sight of its existence, and it is difficult to say which of these two errors is the more mischievous. A woman applies to a practitioner who is guilty of the first mentioned error, complaining of painful and scanty menstruation; he at once adopts mechanical means for her relief. He introduces bougies to widen the canal, and to remove some, perhaps imaginary, contraction of the cervix uteri, by which he conceives the escape of the menstrual fluid to be impeded, and he even incises it to make sure of enlarging its calibre. After undergoing much pain of body, and much distress of mind, the patient finds herself at the end of these manipulations no better than when they began; the cause of her sufferings lay deeper, and was to have been found in the derangement of her general health, which would have attracted the notice of a better physician, and which well-directed measures would probably have cured. Let me mention another case as illustrative of the opposite error. A patient seeks for relief on account of profuse menstruation, at-

tended with discharge of coagula, but accompanied with little or no pain. General treatment is adopted, the patient is confined to the recumbent posture, in a cool and well-ventilated room, astringents are given internally, cold is applied locally, and no sign of disorder of the general health is allowed to pass without appropriate means for its cure; but yet amendment does not follow, for the bleeding depends upon the presence of a minute polypus, which nothing but careful examination of the uterus could discover. In the one case, a crass mechanical treatment was adopted to cure an affection which depended on the state of the general health; in the other, general treatment failed to remove symptoms which careful investigation would have shown to depend upon a local cause.

But I need not draw upon imaginary cases in order to enforce the caution that I am desirous of impressing on you; the records either of hospital or of private practice afford illustrations of it in abundance.

A middle-aged woman complained of frequent desire to pass water, and of discomfort in voiding it; she was dyspeptic and out of health. Her urine was tested, and found to contain albumen; and the irritable state of her bladder was assumed to be dependent on the disease of her kidneys. Treatment improved her general health, but brought no relief to her dysuria. At length careful observation discovered the albumen to be due to the admixture of vaginal discharges with her urine; a not infrequent source of it in women who suffer from leucorrhœa, while examination, which had been delayed too long, detected a small vascular tumour just within the orifice of the urethra, to the irritation produced by which her symptoms were due, as was shown by their immediate disappearance on its removal.

A young lady whose health had never been robust, began at the age of twenty-two to menstruate irregularly and scantily, and to suffer at the same time from pruritus of the vulva. For this symptom various local applications were resorted to, and more than once she underwent the distress of an examination which discovered nothing more than an increased degree of redness

about the labia and nymphae. At length with the decline of her general health she came under the care of another physician, who ascertained that sugar was present in her urine. The pruritus, like the itching of the urethra in the male subject, was the consequence and the symptom of the diabetes of which the poor girl eventually died.

A woman was admitted into the hospital a few years ago in a state of extreme suffering; her countenance was very anxious; she lay in bed with her knees drawn up, dreading the slightest movement; her abdomen was intolerant even of the slightest pressure. She was reputed to have peritonitis, and had been bled for this, as well as abundantly salivated before her admission, yet without relief. But with all this her skin was perspiring, and her pulse was soft and not increased in frequency. Her history was, that after vague uterine ailments for a month, she was suddenly attacked by violent pain in the womb, attended with bearing-down efforts equal in intensity to those of labour. These subsided, but the pain was referred to the bladder, and desire to pass water became very frequent. This too abated, and the next complaint was of violent pain in the shoulder, which was encountered by active measures for the relief of alleged inflammation of the shoulder joint; and the pain in the shoulder suddenly ceasing, the severe abdominal suffering at once succeeded it. A hot hip-bath gave almost immediate relief, though the patient screamed when moved in order to be placed in it; and a full dose of opium was followed by some hours of quiet sleep. The next day no pain was complained of except over the pubes, and this soon disappeared under the use of anodynes; and steel and good food completed the cure of a case of hysterical peritonitis.

Now these cases, to which it would be very easy to add many more, are all examples of the error of making too little or too much of symptoms indicating disorder of the sexual system. Your general medical knowledge must keep you from the latter; it is my special duty to arm you against the former, or rather as much as in me lies to defend you from both.

With this view I propose to-day to make a few introductory remarks upon the *signs and symptoms of disease of the generative organs* in the female, and on the means of investigating them.

There are *three* modes, in some or all of which these affections manifest themselves—namely, by causing *disturbance of function, alteration of sensibility, or change of texture.*

The ovaries are the grand organs of sexual activity in the female ; and during the whole time that sexual life continues, they are employed in the healthy individual in bringing ova to maturity, and then in extruding them at certain periods when they have attained a state of fitness for further development, if subjected to the fecundating influence of the semen. Accompanying this internal process, the consequence and the evidence of the local congestion which attends it, we observe a periodical discharge of blood constituting menstruation. The regular return of menstruation, its accomplishment within a given period, attended by a certain average amount of discharge, and by no more than a certain average degree of discomfort, are regarded by women, and with propriety, as conclusive evidences of the healthy state of the sexual functions. In every inquiry, therefore, with regard to supposed disease of the generative apparatus, the mode in which this function is performed must engage your careful attention. You know menstruation to be merely the sign of a more important process going on deeper within the organism. The non-appearance of the discharge, then, or its suppression, suggests at once many important inquiries which must be carefully followed up, till you can return to them a satisfactory reply. Is the system so feeble that, like an ill-thriven plant, its sexual power remains altogether in abeyance ? or are the ovaries themselves diseased ? or does the internal process go on, while yet, owing to some mechanical cause obstructing the escape of the discharge, its outward manifestation is wanting ? or is its appearance prevented by some disorder of the general system, or of the uterus, which incapacitates that organ from performing its usual office as a kind of safety-valve

by means of which the congested pelvic vessels are relieved of their superabundant blood? Or is perchance none of these suppositions correct, and is the real explanation of the suppression of the menses to be found in a physiological not in a pathological occurrence, and are the symptoms those of pregnancy, not those of disease? Such are the important questions which in every case of suppressed menstrual discharge you must endeavour to answer, and to which, both for your own reputation as well as for your patient's well-being, it is of the greatest moment that you should return a correct reply. Or, again, your patient suffers from what she conceives to be excessive menstruation, her health is breaking down beneath it. Whence comes the discharge? is it due to a state of general plethora, which nature endeavours to relieve by this outlet, though in her endeavours she exceeds the limits of safety? or are the vessels so weak that blood escapes from them with dangerous profusion? or is the hæmorrhage due to neither of these causes, but to a breach of surface, to some ulcer of the womb from which the blood flows, or to some morbid growth, or formidable organic disease, the effect of which is rendered more serious just at those times when the uterus becomes more than usually congested? These, and similar inquiries, possess a special importance at certain epochs of a woman's life; for when the sexual powers are on the decline, disease is especially liable to be set up, and you therefore regard all menstrual irregularities at that time with closer attention than at any former period.

But there are other subsidiary functions performed by the generative organs, the disturbance of which is sometimes the occasion of mere discomfort, at other times the indication of serious disease. These organs present a great variety of secreting surfaces, which furnish matters of various kinds, subserving various purposes. A slight secretion moistens the interior of the Fallopian tubes, just as it does that of all viscera, and except near the monthly periods of sexual activity, it is by little more than a mere halitus that the cavity of the womb itself is lubricated. The large mucous crypts or glands about its neck fur-

nish a peculiar secretion, which is generally present at all times, though most abundant during pregnancy. The mucous follicles of the vagina pour out a somewhat copious secretion upon its surface ; and the two glands which are seated, one on either side of its entrance, and which under the name of Duverney's glands correspond to Cowper's glands in the male, furnish an abundant discharge at the time of sexual congress ; and, lastly, numerous mucous crypts and sebaceous follicles on the nymphæ, the interior of the labia, and about the vestibulum, supply a suitable secretion to lubricate those parts. From any or all of these sources secretion may be furnished, excessive in quantity, and more or less altered in character. The secretion may be a mere leucorrhœa, an increased flux from otherwise healthy tissue ; it may be a purulent discharge from inflammation of a mucous membrane, or it may be furnished from an ulcer of the womb ; or, it may not be simple pus, but an offensive sanies from a widespread cancer of the organ, or of some part adjacent. Your patient may come to you in complete ignorance as to which of all these is the cause of the affection under which she is labouring : she looks to you for an answer to her doubts, and for relief to her sufferings.

Diseases of these organs, however, are associated not merely with altered function, but also with *disordered sensibility*, and that not only of the part affected, but also of others more or less distant. There is hardly any more fertile source of erroneous diagnosis with reference to the diseases of women than the overlooking the import of some of these alterations of sensibility, and the not connecting with its proper cause the sympathetic affection of some, perhaps, distant organ. If a woman complain of a sense of heaviness in the pelvis, of bearing down pain, of pain in the loins, and about the sacrum, or shooting down the thighs, our attention is naturally directed to the state of her sexual organs, and we are not likely with moderate caution to overlook the real seat of her disease. In many cases too, something beyond the seat of the disease may be learned if we notice the character of the pain from which the patient suffers, since

this is usually of one kind if inflammation be present, of another if there be cancerous disease, of a third if there be displacement of the womb. These minutiae too are of all the more importance for us to attend to, since there are no other diseases in which that personal investigation by which so many questions can be at once answered is attended by so many difficulties, both from the natural repugnance of the patient to submit to it, as well as from the imperfection of our means of examination.

But disease of these organs is not seldom attended by pain which is referred not to the real seat of the mischief, but to some other, perhaps some distant part. Women may apply to you, who seem out of health, and in whom you may, perhaps, at first, suspect the existence of uterine disease; but they appear annoyed at inquiries with reference to their sexual functions, or perhaps deny, and with perfect truth, the existence of any pain in the uterus, or its immediate neighbourhood. Perhaps, however, they may confess to pain in the rectum, especially at the time of defæcation; or may speak of symptoms which they refer to hæmorrhoids; or may complain of sciatica, or of lumbago. Always suspect the import of these sufferings; bear in mind the wide sympathies of the pregnant womb, and keep all your vigilance active; it is highly probable that these anomalous symptoms will resolve themselves into the effects of uterine disease.

Nor are they merely strange and intractable forms of local ailment which should call your special attention to the uterus and its functions. The pregnant woman suffers almost invariably from nausea and vomiting; her appetite often becomes capricious, and her digestive functions are frequently ill performed; while it is far from unusual for her to have attacks of headache, or of tic-douloureux, though she may at other times enjoy a complete immunity from all such ailments. But just as disorder of the functions of other organs not seldom attends upon the physiological processes going on in the womb, so may it follow upon uterine irritation produced by disease; and a large proportion of the most obstinate forms of dyspepsia, and a still larger number of hysterical and nervous affections, have been

excited and are kept up by disease of the womb. In a great many of these cases, minute inquiry elicits evidence of functional disorder of the generative organs, as shown by disturbed menstruation, by leucorrhœal discharges, or by painful sensations, although none of these symptoms may have been so marked as to have engaged the patient's notice; or she may have regarded them as trivial accidents not worth mention when compared with the other, and to her feelings the more important causes of her sufferings.*

Need I guard myself against being misunderstood, against being supposed to say that, in the management of a woman who is dyspeptic, your attention is to be turned less to the state of her stomach than to that of her womb; or that, if a woman suffer from neuralgia, you are at once to suspect the existence of uterine disease? I mean no such thing; but *what I do mean* is, that, in the treatment of diseases occurring among patients of the female sex, you should always bear in mind that, besides the ordinary causes of disease common to both sexes, there is another set of causes peculiar to themselves. Whenever, therefore, the ordinary principles of pathology fail to explain, or the ordinary proceedings of therapeutics prove inadequate to cure the ailments of any female patient, it behoves you to remember that, in her sex, and in its peculiar diseases, you may perhaps find a clue to the cause of her present symptoms, and discover indications which may show you how to accomplish their cure.

* In Vol. II. of Lisfranc's *Clinique Chirurgicale*, 8vo, Paris, 1842, from p. 182 to p. 256, are some remarks, with illustrative cases, on errors of diagnosis in uterine disease, which, though not free from the characteristic faults of that writer, will yet well repay an attentive perusal.

LECTURE II.

INTRODUCTORY.

Symptoms of disease of generative organs, furnished by alterations of size, texture, or situation, to be ascertained only by examination—General remarks on the subject—Examination either tactile or instrumental—Tactile examination of the abdomen, per vaginam, per rectum—Instrumental examination, by means of the Uterine Sound; description of the instrument, and rules for its introduction; examination with the Speculum; varieties of the instrument; rules for its introduction; attempt to estimate its value.

THERE was not time at our last meeting for the due consideration of the *third and last class of indications of disease of the generative organs*—namely, those *furnished by alterations of their size, texture, or situation*. I must therefore direct your attention to them to-day.

It is, I conceive, quite needless for me to preface what I have to say by any remarks upon the importance of these signs, or upon the necessity of ascertaining the presence or absence of any of these changes in a great majority of the cases in which our patient's symptoms indicate some disorder of her sexual functions.

The examination, however, by which alone this information can be obtained, must be extremely painful to a woman's feelings, since she is not now, as in the time of labour, impelled by the extremity of her sufferings to submit to anything for the sake of relief. She seems indeed to be now peculiarly alive to every painful impression; and while she feels almost overwhelmed by a sense of humiliation at having to undergo an examination, of the necessity for which she may yet feel fully convinced, she will judge with painful minuteness each act of yours—any needless delay, any careless exposure of her person,

any apparent want of delicacy or consideration. With the greatest care, indeed, you will not always escape from undeserved blame ; without it, you will perpetually wound your patient's feelings, and if you do not injure your own prospects, you will yet fail to support the dignity of your profession, and will lead to the inference that there is at least one department of the art of healing incompatible with the tone, and manner, and feeling of a high-bred gentleman. The familiarity which hospital practice begets with these ailments among women whose sensibilities are not always as keen as those of persons in a higher class of life, or the circumstance that they do not venture to express the pain which want of consideration may have caused them, leads but too often to carelessness in these respects on the part of men who would yet shrink from the idea of inflicting a moment's unnecessary suffering upon any one. I am therefore all the more anxious to impress upon you that the delicacy with which you ought to conduct all your investigations into the diseases of women, is not a thing which can be assumed for the nonce, but that it must be the habit of the mind, must therefore have been acquired now during your pupilage, and in the midst of your intercourse with the poor.

We make ourselves acquainted with the existence of disease of the generative organs, either by manual examination or by ocular inspection ; and for the purpose of making such investigations with the greater accuracy, we not infrequently employ instruments of different kinds. The simplest mode of examination, and that which causes our patient the least distress or alarm, is that in which we employ our sense of touch alone, unaided by any apparatus whatever. It is perhaps scarcely necessary for me to remind you that, while it is our duty to use every means essential to the thorough investigation of our patient's condition, it is no less our duty to make no needless examination ; never to use an instrument when we can ascertain all that is necessary without it ; never to resort to ocular inspection when we can feel a reasonable certainty that by the sense of touch alone we have arrived at a true knowledge of the disease.

We derive information from our sense of touch when applied either through the abdominal walls, or by the vagina, or the rectum. *Examination of the abdomen* is not always called for; when it appears necessary, it is well to begin with it. For this purpose the patient should lie upon her back, with her knees drawn up so as to relax the abdominal muscles. It is very seldom necessary to apply the hand to the uncovered surface; the interposition of the patient's shift little if at all interfering with the accuracy of the examination. Care should be taken that your hands are not cold; if they are, this will not only annoy your patient, but, by exciting contraction of her abdominal muscles, may seriously impede your investigation. Placing both hands upon the abdomen, you make at first very gentle pressure, increasing it by degrees as the patient becomes accustomed to it, and trying to engage her in conversation, and thus to distract her attention, if either pain or alarm should cause her to throw her abdominal muscles into action. You thus make yourself acquainted with the general contour of the abdomen, and by examining at either side as well as in the centre, you detect any tumour which may be present there. Supposing any such growth to be discovered, you must examine well its form, its size, its attachments, its degree of mobility, and the amount of tenderness or pain which meddles with it occasions. Is it due to accumulation of fæces in the large intestine; to enlargement of the liver or spleen; or is it perhaps merely the result of a general fulness of the abdomen produced by flatus in the bowels, or by fat in the omentum, or beneath the integuments, rather than the consequence of any definite disease? If the tumour seem to arise from out of the pelvis, it is most probably formed either by the uterus itself or by its appendages. If by the former, the chances are that it will be situated in the mesial line of the abdomen; if by the latter, that it will occupy one or other side, or at any rate that it will be learned to have occupied that situation when first discovered. Whether it is solid or fluctuating, even or irregular, will be other points for you now to make out, and you must then proceed to correct or confirm.

by a vaginal examination the impressions received on examining through the abdominal walls.

It is seldom necessary, for the purposes of a *vaginal examination*, that the patient should be in any other than the usual obstetric position. On the Continent, where women are generally delivered on the back, they often assume that position whenever the state of the uterus needs investigation. Sometimes, too, when it is wished to appreciate the degree of prolapse or downward displacement of the uterus, or to estimate its increase in weight, or when the womb is high up and does not come readily within reach, the examination is made with the patient in the standing position; I do not think, however, that any of the alleged advantages of this attitude are sufficient to counterbalance its very obvious inconveniences. The patient, therefore, lying on her left side, the index finger of the right hand is introduced as for an examination in labour, and as it is slowly carried forwards, attention is to be paid to the degree of pain excited in each part of its course. The state of the external organs must be noticed, and then that of the vagina—whether it is hot and swollen, or cool and relaxed; whether dry, or abundantly bathed in secretion. The cervix uteri is thus reached, and you observe whether or no it is tender, what are its length, and size, and texture; whether the os uteri is open or closed; whether its lips are small and even, or rough and irregular. You will bear in mind, that after frequent child-bearing, the cervix uteri is both shorter and broader than in the woman who has never given birth to children (changes which are especially marked in that portion of it which projects into the vagina, and is commonly called the *portio vaginalis*); and that the os uteri is frequently open, so as to admit the finger with but little difficulty. In this case, however, the inner surface of the os is smooth, and the tissue of the cervix soft and yielding; while if disease exist, the interior of the os will most likely be rough and uneven, and the substance of the cervix rigid. Sometimes a peculiar and almost velvety smoothness is presented by the surface of the os uteri, or the tissue generally has less than its

natural firmness ; and any of these peculiarities, or the presence of any foreign body between the lips of the uterus, should be well borne in mind, in order that you may afterwards compare the information obtained by ocular inspection with that previously gained by the sense of touch. While making this examination, you notice, moreover, the situation of the uterus, whether it still retains its natural direction, or has come to lie with its axis corresponding to the axis of the vagina ; whether it is bent upon itself, or in any other way misplaced. Examine next, whether the uterus is increased in weight ; balance it on your finger, and appreciate as well as you can the size and weight of the organ. If you had discovered any tumour by examination through the abdominal walls, you should now try to ascertain whether there is any connexion between it and the uterus, or between it and any other tumour that you may detect within the pelvis, and whether pressure on the one in any way modifies the position of the other. All these points being ascertained, with as much gentleness as possible, the vaginal examination is over, and there is nothing more for you to notice, except it be the appearance or other characters of the discharge.

Sometimes it is expedient to examine *per rectum* as well as *per vaginam* ; if either the patient had made complaints of serious pain in the bowel, or if you had discovered a tumour situated behind or to one side of the uterus, or if on any account you are anxious to examine the posterior part of the pelvis, or of the uterus itself, as completely as possible. The only caution specially applicable to examination *per rectum* is, that owing to the intervention of the intestine between the finger and the womb, that organ feels much larger than it really is ; besides which, as the finger reaches less readily to a level with the cervix uteri when introduced into the rectum than into the vagina, there is some risk of mistaking the cervix for a prominence of the posterior wall of the uterus, or for a tumour in that situation, or for a retroversion or retroflexion of the organ, when, in reality, no morbid condition whatever is present.

Of late years it has become customary in many cases to aim

at a greater completeness of tactile examination, by means of an instrument which is called the *Uterine Sound*. At different times, indeed, practitioners have in some special instance introduced a catheter into the uterus to satisfy themselves of the size of its cavity, or of the absence of any foreign body from its interior; or in retroversion of the unimpregnated womb, the reduction of the organ has been effected by means of an instrument introduced within it.* To the best of my knowledge, however, a Frenchman, M. Lair, was the first person who, rather more than twenty years ago, recommended sounding the interior of the uterus in order to ascertain whether the cervix is free from all impediments, and whether the cavity of the organ generally is in a healthy state. His book is illustrated with drawings of the instruments which he employed for this purpose;† and he advised that they should be curved like a catheter at their uterine extremity, in order to facilitate their introduction. He recommends, moreover, that the sound should be introduced through a metallic cylinder or speculum, by which the mouth of the womb is to be first brought into view; a proceeding which, instead of facilitating the introduction of the instrument, must, in many cases, have rendered it altogether impossible. The practical defects of M. Lair's plans prevented their general adoption; and his recommendations were in consequence soon forgotten. To Dr. Simpson,‡ of Edinburgh, belongs the merit, not only of having recalled attention to the subject, but of having also invented an Uterine Sound, admirably adapted for the safe and easy exploration of the cavity of the womb. His instrument is made of flexible metal; and in shape and size, closely resembles a sound for the male bladder, having

* The late Professor Osiander, of Göttingen, employed his *Dilatorium Orificii Uteri*, which is described in Rosenmeyer's dissertation, published at Göttingen in 1802, on three occasions, to reduce the retroverted unimpregnated womb. His cases were published in the *Medicinisches Chirurgisches Zeitung* for 1808, according to Schmitt, who refers to them in his Essay, *Ueber die Zurückbeugung der Gebärmutter*, 8vo, Wien, 1820.

† *Nouvelle Méthode du Traitement des Ulcères, etc. de l'Uterus*, 8vo, Paris, 1828. Deuxième édition, p. 137. The first edition appeared about two years before.

‡ In a series of papers in *London and Edinburgh Monthly Journal* for 1843.

a similar curve, and its handle being flat, and roughened on one side in the same manner. The uterine end of the instrument terminates in a small bulb to prevent its injuring the interior of the womb, while a notch at every inch serves to indicate the distance to which the sound has entered the womb; and thus to mark the size of its cavity. A slight prominence at two and a half inches shows the *average length of the cavity* of the healthy womb, while a deep depression at four and a half inches marks a size, which, except under very special circumstances, the organ hardly ever exceeds.

The mode of using the instrument is sufficiently simple. Two fingers of the left hand are introduced behind the cervix uteri, as the patient lies on her left side, and the sound is slid along the fingers till its point reaches the os uteri, when, by depressing the handle towards the perineum, and at the same time carrying the instrument gently forwards, it will enter the uterine cavity. I need not say, that it must never be employed when the least ground exists for suspecting pregnancy; and that under no circumstances must force be used in its introduction. In the majority of cases the introduction of the sound causes some pain, though this is generally by no means severe, and is almost always of very short duration; and in no instance which has come under my observation, have dangerous consequences resulted from its use, though awkwardness and fool-hardiness have, I know, done mischief with this, as with almost every instrument that has ever been invented.

The information which this instrument places within our reach is often extremely valuable; and of a kind such as otherwise we could not obtain at all, or could arrive at only very slowly, and by frequently repeated examinations. If, in a patient suffering from frequent hæmorrhages, we ascertain the uterine cavity to be greatly increased in size, our immediate conclusion is that the womb contains some foreign body, as a polypus or fibrous tumour, the presence of which has excited, and serves to keep up the bleeding. If we doubt whether a tumour proceeds from the womb, or its appendages, or from

some other part within the pelvis, the sound enables us to estimate the weight of the organ, and to strengthen the inference drawn from this experiment, by completely isolating the womb from the tumour, and thus ascertaining positively their independence of each other. Or lastly, if the uterus be bent upon itself either forwards or backwards, the diagnosis of this condition, which once was a matter of much difficulty, is now often arrived at with facility, by introducing the sound with its concavity directed towards the swelling we detect per vaginam, and observing whether or no this swelling disappears on turning round the instrument. I will not now go into further detail on the subject, for I shall hereafter have to refer on many occasions to this valuable aid to diagnosis. The uterine sound, indeed, is not always applicable, nor does it when used always clear up our doubts; but I do not remember any instance in which a diagnosis based on the information which it afforded turned out afterwards to be erroneous.

The idea of employing some contrivance by which the condition of the uterus might be examined by the eye was not altogether unknown to the ancients, though for the most part these instruments of which drawings may be seen in old works on midwifery, and which received the name of *Speculum Matricis*, were employed for dilating the mouth of the womb during labour, rather than for examining its condition in disease.* An instrument similar in kind, however, appears to have been sometimes used for the investigation of diseases of the uterus and vagina, though it never came into anything like general use. The introduction of the speculum into modern practice as a means of facilitating the investigation of uterine disease does not date further back than the year 1821, when the instrument was first employed by M. Récamier. This, which was merely a cylinder, conical in form, rounded off a little at its uterine extremity, and bevelled at its other end, was next fitted with a small handle by M. Dupuytren, and afterwards a plug was adapted to it to render

* See some remarks and quotations referring to the early history of the speculum, in Balbirnie, *Organic Diseases of the Womb*, pp. 41—45. 8vo, London. 1836.

its introduction more easy. Various materials have been used in the fabrication of these instruments, but we owe the greatest improvement in this respect to Mr. Fergusson of King's College. Instead of employing metal, which is very apt to tarnish, and never has a very powerful reflecting surface, or glass, which though very useful when caustics are to be applied to the uterus or vagina, since they do not act upon it, is yet liable to be broken, and moreover, owing to its transparency, does not reflect very powerfully, he adopts the following plan:—A glass speculum is silvered on its outside, by which means the inner-surface is converted into a mirror easily kept clean, and on which no caustics can act. The speculum is then enveloped in successive layers of cotton-cloth, each of which is covered with a solution of Indian-rubber, and when the glass has thus received a coating of sufficient thickness it is varnished, and forms an instrument which is now in general use. Its funnel-shaped termination is intended to provide for the admission of as much light as possible; a point of the more importance in this country, from the almost universal practice of examining patients on their side, in which posture light has a less ready access to the parts than if, as on the Continent, the patient lay on her back. The object of the instrument being slightly bevelled off at its uterine extremity, is that you thereby secure the same advantage* as if the diameter of the cylinder throughout were greater. This sloping off of the instrument, however, must not be carried, as some have recommended, so far as to amount to an angle of forty-five degrees, since by so doing you encounter the inconvenience of a fold of vagina falling down in front of the cervix uteri. The specula which I use may perhaps appear to you of an unnecessary length; but you must bear in mind that the vagina is a very extensile canal, and that when a speculum is introduced into it, it is stretched in length as well as in width, so that the ordinary length of the vagina is not to be taken as the measure for the length of the speculum. I believe the attempt

* This useful modification of the speculum was, I believe, first suggested by Dr. Warden, *London and Edinburgh Monthly Journal*, Dec. 1844.

to reach the os uteri fails from the shortness of the speculum oftener than from almost any cause, and quite agree with the opinion of the late Professor Lisfranc of Paris,* that a speculum ought to be at least seven inches long.

In spite of the general convenience of the cylindrical speculum, however, there are some drawbacks from its utility. Owing to the entrance of the vagina being narrower than any part of its canal, it happens sometimes that a speculum sufficiently small to pass without causing the patient severe pain, is not large enough to bring the whole of the os uteri into view. But even though its whole surface be exposed, yet the cylindrical speculum pressing the lips of the os together may prevent a good view being obtained of its interior, and may thus render the examination incomplete and unsatisfactory. To obviate these disadvantages, specula have been constructed on the principle of the old instruments, composed of two, three, or four blades, and so arranged, that by turning a screw or by closing the handle, the uterine extremities separate, and thus expose the os uteri to view without any enlargement of the other end of the instrument. The best known of them are the two-bladed speculum of M. Ricord; a three and a four-bladed speculum manufactured by M. Charrière, of Paris; and a two-bladed instrument recently invented by Mr. Coxeter, instrument maker to University College. M. Ricord's instrument, and to a less extent those of M. Charrière, have the inconvenience that folds of the vagina are apt to fall down between the blades, and thus conceal the os uteri from view. This objection does not apply to nearly the same extent to Mr. Coxeter's instrument; each blade of which being a half-cylinder, does not leave the same space vacant when it is opened. Two or three different sizes, then, of Fergusson's speculum, and a Coxeter's bivalve speculum, which last it is worth while, for the sake of obtaining a better reflecting surface, to have electro-plated, are all the instruments you need for ocular examination of the uterus.

On the Continent, the posture usually assumed by a patient

* *Clinique Chirurgicale*, etc., vol. ii. p. 272.

when about to undergo a specular examination, is on the back, with the nates resting on the edge of a bed or table, and the legs bent up towards the body, or the feet resting on two chairs, between which the doctor stands. There can be no doubt but that in this position of the patient the os uteri falls more readily within the orifice of the speculum, and that light is admitted much more thoroughly than in any other attitude; but its apparent indelicacy is so serious an objection to it, that except under especial circumstances, it is desirable to introduce the speculum with the patient lying on the left side. In this position, too, unless the os uteri be directed in a remarkable degree backwards towards the sacrum, a very good view can generally be obtained, provided the patient lie with her body directly across the bed, her hips close to its edge, and her thighs drawn up towards the trunk; in the same attitude, indeed, as we should place a person in, on whom we were about to apply the forceps in labour. If the patient be not in bed, the same precautions as to her position must be taken as she lies down on a couch or sofa, and a very little care in the arrangement of her dress will prevent the least exposure of her person. The speculum, having been previously warmed and lubricated, is then to be introduced with the right hand, while with your left you separate the labia and nymphæ. Care must be taken that the end of the speculum is passed thoroughly within the opening of the vulva, since, if this precaution be neglected, a little duplicature of the fourchette is sometimes pushed before the instrument, and much needless pain is caused to the patient. The great obstacle to the introduction of the speculum is met with at the entrance of the vagina, and this must be overcome by gentle effort, not by anything approaching to violence. The speculum then passes on with facility, and when it has entered for some distance you withdraw the plug, and possibly find that the os uteri is now within view. You must, however, bear in mind, that the folds of the vagina sometimes hang down at the further end of the speculum, leaving a small aperture between them, which may be mistaken for the os uteri; though,

on moving the instrument a little, the contour of the orifice will alter, and the vaginal folds dispose themselves in a different form. If, although you have introduced the speculum for some distance, the os uteri do not appear, the probabilities are that you have passed beyond it, and that the instrument has gone up into the *cul-de-sac* of the vagina, behind the neck of the womb. In this case, by gently and gradually withdrawing it, the os uteri will most probably come into view; if it do not, you may move the speculum slightly from side to side, since it is likely that the uterus is not quite in the mesial line, and that thence arises the difficulty in getting sight of it. When once you have the os uteri within the speculum, a little manœuvering will generally suffice to remove any fold of vagina which obstructs your view; while, if the neck of the womb be very large, you may be compelled to examine first the anterior and then the posterior lip of the organ; and in this case you will find a bivalve speculum much more useful than the cylindrical instrument.

There are many other little matters of detail connected with the employment of the speculum well worth the knowing; but to be learned rather by personal observation and actual practice than by any description. Need I say that there are some cases, those of unmarried women for instance, in which nothing but the most urgent necessity would justify your employing the speculum; others, as the majority of cases of cancer of the womb, in which its use would furnish no important addition to your previous knowledge; and still others in which its employment must be postponed, if not actually interdicted; such, for instance, as cases of extreme sensibility of the parts, of inflammation or ulceration of the vagina or of the external organs? Restrictions to its use, indeed, such as these, speak to the common sense and right feeling of every one too distinctly for there to be much hesitation in subscribing to them. But, while admitting them, some of you may be inclined perhaps to go still further, and to inquire of me, whether, on the whole, the advantages arising from the use of the speculum outweigh the evils resulting from its abuse; whether it helps us to so much addi-

tional knowledge, or adds so much to our therapeutical resources as to counterbalance all the suffering both moral and physical which its employment not infrequently inflicts upon the patient? Now, if I had a strong opinion on the negative side of this question, I should certainly not have taken up so much of your time in describing the instrument, and in directing you how to use it. The restrictions which my present experience leads me to put upon its employment, will be best appreciated when I speak of each disease in the management of which it has been advised to have recourse to it; and whether my views be right or wrong, I do not apprehend much difficulty in expressing them. To answer the broad question, "What is your opinion of the speculum?" I feel, on the other hand, to be a very difficult matter, and to expose me to much risk of being misunderstood.

I will, however, do my best to reply to the inquiry. Those who first introduced the speculum into practice, employed it for two purposes; partly as furnishing a new means of diagnosis, partly as enabling them to adopt various modes of local treatment, which, without it, were impracticable. Now I believe that the advantages of those topical medications for which the speculum is needed, has been greatly overrated; though there are some cases, and those such as have proved most rebellious under other plans of treatment, in which these local measures may be resorted to with the most signal advantage.

In estimating the value of the speculum as a means of diagnosis, I think that the advances in knowledge of uterine disease, of which it was the indirect occasion by the impulse which it gave to their study, are sometimes confounded with those positive additions to our information which we owe exclusively to the use of that instrument. The former have been very great indeed, and I think candour compels us to acknowledge that they have been due almost exclusively to persons who, not content with our previous means of investigating uterine disease, have laboured to increase them by the employment of instruments. The latter have certainly been less considerable, but nevertheless the speculum enables us in many instances to decide at once, and

with certainty, upon the nature of a case, which otherwise we should have understood only after long and careful watching, to discover some minute polypus which the fingers alone would not have detected, to determine the source of a profuse leucorrhæal discharge, and to decide whether it is furnished by the cavity of the womb, or the walls of the vagina; or from the redness, congestion, or abrasion of the os uteri to infer the state of the womb generally, and thus to conduct our treatment upon the sure ground of positive observation, not upon bare presumptions. At the same time, however, that I hold the speculum to be in many cases of most essential service, I think that the endeavour of all of us should be to ascertain the minimum of frequency with which its employment is necessary. This is to be done not by decrying the instrument, still less by attributing dishonest motives to those who use it, but by soberly and honestly trying to test the value of the information which we derive from it, and learning to discriminate between those appearances which the speculum discloses that are of moment, and such as are of no importance.

LECTURE III.

MENSTRUATION, AND ITS DISORDERS.

Importance of disorders of menstruation ; their three varieties—Relation of tardy puberty to menstrual disorder.

AMENORRHŒA, from local causes, from congenital absence or malformation of sexual organs, from retention of menses owing to impediments to their flow.

Amenorrhœa, from constitutional causes—tardy development, influence of previous illness in causing it. Symptoms, chlorosis whereon it depends—state of the blood. Consequences of amenorrhœa.

Treatment—principles which should regulate it—attention to general health, to uterine functions. Vicarious hæmorrhages, their import, their management.

Importance of habit in all ailments of menstrual function.

I CALLED your attention, in the first Lecture, to the importance of the menstrual function, and to the frequency of its disorders. I told you that almost every serious ailment of the generative system, at least during the period of sexual activity, betrays itself by some disturbance of menstruation ; and I may further add, that such disturbance is often the first, and sometimes for a considerable period the only, symptom of even grave disease. But you also know that disordered menstruation does not invariably depend on local mischief, that derangement of function does not always imply altered structure, but that a woman may menstruate scantily, painfully, or in excess, and yet no part of her generative organs may differ in appearance from those of a person in whom that function has always been performed in the most healthy manner.

The disorders of the menstrual function, then, being so numerous, so important, and dependent on such various causes, it will be our best course to study them first, and afterwards to examine

into other diseases of the sexual system, in which, though disordered menstruation may occur as a symptom, it is yet not the only one, nor that which calls for the chief consideration in the treatment of the patient.

There are *three* grand classes, to one or other of which it has long been customary to refer the different disorders of menstruation. Either the menses do not appear at that period of life at which their occurrence is naturally expected, or they become suppressed in persons in whom they have already occurred, or their discharge is attended with extreme pain, or it is excessive in quantity, or over-frequent in its return. I propose to consider in its turn each of these three varieties of *disordered menstruation*, which have respectively received the names of Amenorrhœa, Dysmenorrhœa, and Menorrhagia.

It is, as you know, wisely ordered that the power of perpetuating the species is the last of nature's gifts, and one which she does not accord until the whole system has, in other respects, attained nearly to its perfection. Of this new power in woman, menstruation is both the sign and the consequence, indicating that the ovaries have become capable of bringing to maturity the germs, which need only to be impregnated in order to become developed to new beings. In our climate, the date of the first occurrence of menstruation is between the fifteenth and sixteenth year;* but the changes at puberty in the maiden, like those at dentition in the babe, are not accomplished all at once, but extend over a period of several months, during which disease is more frequent, and, as our Tables of Mortality show, more fatal, as compared with the male sex, than at any former time.† The anxiety with which parents regard the approach of this epoch is,

* Mr. Whitehead, of Manchester, gives fifteen years six and three-quarter months as the average deduced from 4000 cases, in which he made this point the subject of inquiry. See p. 47, of his *Treatise on Abortion and Sterility*. 8vo, London, 1847.

† Thus, MM. Quetelet and Smits, in their work, *Sur la Reproduction et la Mortalité de l'Homme*, 8vo, Bruxelles, 1832, show that while in childhood the mortality of the two sexes has been equal, or that of the male has predominated; the female mortality at once rises between fourteen and eighteen years of age to 1·28 to 1 male death; sinking again in the succeeding four years to the proportion of 1·05 female to 1 male death.

then, not unnatural; nor is it without good reason that this anxiety is increased more and more in proportion as delay occurs in the appearance of the first menstruation, since, when the menstrual function has been even once properly performed, many of the dangers of puberty may be regarded as already passed.

Mr. Whitehead, of Manchester, to whom the profession is indebted for some very interesting researches into these subjects, ascertained that the risk of some unfavourable accident complicating the first establishment of menstruation is very much greater when that is tardy in its occurrence than when it is premature; and that in between a third and half of all cases in which it is delayed to nineteen years and upwards, its appearance is associated with either local or constitutional disorders: a statement with which my own experience coincides.*

The mere circumstance, indeed, of a girl having passed the age at which menstruation usually appears, without performing that function, is not of itself a reason for medical interference.

* Mr. Whitehead's table, *lib. cit.* p. 48, yields the following results:

First Menstruation.	Total Number of Cases.	Number Unfavourable.	Percentage of Unfavourable.
From 10 to 14 years .	1141	224	19·63
Between 15 and 16 .	1728	324	18·75
„ 17 and 18 .	892	247	27·69
From 19 and upwards .	239	97	40·58
Total . . .	4000	892	22·30 aver.

In 566 cases in which I ascertained the date of the first menstruation, either excessive pain, excessive discharge, irregularity of its return, or disorder of the general health, occurred with the frequency shown in the following table. The conclusions to which it leads are the same as follow from Mr. Whitehead's more extended researches.

First Menstruation.		Unfavourable.	Percentage of Unfavourable.
Under 15	228	41	17·9
Between 15 and 17 .	220	33	15·
„ 17 and 19 .	92	22	23·9
At 19 and upwards .	26	11	46·1
Total . . .	566	107	25·7 aver.

The date of puberty varies very widely, and one woman may menstruate at ten, and another at twenty years of age, without the health of either being of necessity impaired. Usually the absence of menstruation in otherwise healthy young women, is associated with the absence of some of the other signs of puberty, indicating a generally tardy sexual development, just as, without apparent cause, one tree will produce blossoms and bear fruit later than another. This, however, is not always the case, and instances are sometimes met with of persons in whom pregnancy has preceded menstruation; completeness of sexual power having existed, though not manifesting itself by its ordinary sign. Such cases were a greater puzzle to physicians in former days than they are to us, who know that the discharge of blood is not the essential part of menstruation, but that the maturation and extrusion of ova may occur independent of it. One instance of it has come under my own notice, in a woman who, never having menstruated, married at the age of twenty, and immediately became pregnant; nor did the menses appear till after the birth of the first child, though she subsequently menstruated regularly, and had a numerous family. This, however, is very rare, and there would always be reason to apprehend that a woman who had not menstruated before marriage would remain sterile afterwards. Besides, it is possible that the non-appearance of the menses depends upon some congenital malformation, which might even prove a bar to sexual intercourse, such as absence of the vagina or its imperfect formation. If, then, your advice be asked as to the propriety of any young person marrying who has not menstruated, I should advise you to recommend delay; and if still further urged, to withhold your sanction until you had ascertained that no serious defect of structure is present. The pain of such an investigation would fall far short of the distress which would be entailed upon all parties, if a woman with some important malformation of her sexual organs were to contract marriage.*

* An important case illustrative of this subject is related by Dr. Meigs, at p. 119 of his translation of *Colombat on Diseases of Females*. 8vo, Philadelphia, 1845.

Amenorrhœa from imperfect formation of the sexual organs may depend either upon causes which altogether prevent the performance of the menstrual function, or on such as merely interfere with the discharge of the menstrual fluid. Cases of the former kind are fortunately very rare, since, depending on the absence or defective formation of the uterus or ovaries, they are completely beyond the reach of remedy; those of the latter description generally admit of cure. In some of the former class of cases, the sexual character has been altogether imperfectly developed, and the woman has never experienced any periodical occurrence of symptoms such as usually prelude the appearance of the menses, while in others the women have been liable to periodical attacks of pain in the back and loins, and to all those indications of suffering by which the menstrual flux is often attended, and have presented in their outward form all the indications of perfect womanhood. It is not easy to account for all of these differences, since, in some instances, where the sexual character was but imperfectly marked, the ovaries were found after death sufficiently well formed, though the uterus was absent or merely rudimentary.

A few cases are on record of alleged absence of both ovaries, in spite of the otherwise natural formation of the sexual organs. Such cases, however, are excessively rare, and the probabilities are that in many instances, the organs were present though in a very undeveloped condition. Somewhat less uncommon are the instances of absence of one ovary; a malformation generally associated with absence of the other uterine appendages on the same side, and sometimes also with absence of the corresponding kidney: a circumstance which will not surprise you if you bear in mind the mode of development of the urinary and generative apparatus, and the intimate relation which subsists between them at an early period of fœtal existence. Much less uncommon than the absence of either ovary is the persistence of both through the whole or the greater part of life in the condition which they present in infancy and early childhood, with scarcely a trace of Graafian vesicles in their tissue. This want of

development of the ovaries is generally, though not invariably, associated with want of development of the uterus and other sexual organs; and I need not say that women in whom it exists are sterile.

Two instances have come under my own notice in which there was reason to suppose that some defect of development of the ovaries was present. The first patient was a woman aged forty-three, who had been married for twenty years, but had never menstruated, nor had ever been pregnant. In her case the sexual organs were well formed, though the uterus was small, and sexual appetite existed. The other case was that of a young girl about twenty years of age, who was for some time under the care of Dr. Roupell, suffering from those vague symptoms of disorder of the general health which so frequently exist when the appearance of the menses is delayed. She presented the general signs of puberty, but her vagina was very small, and her uterus was not larger than that of a young child. I do not know what became of her eventually, but it is quite possible that the evolution of her sexual organs, though long delayed, may at length have taken place, and been followed by the due performance of their functions.

Conditions* such as these which I have been speaking of interest us rather as physiologists than as practitioners: we can only guess at their existence, and can do nothing for their remedy. Though not so obscure, still quite as hopeless are those cases in which the uterus alone is absent, or, as is more frequently the case, is represented by one or two small bodies, of the bigness of a bean, or even smaller, made up of true uterine tissue, rudiments, as it were, of the deficient organ. This absence of the uterus may co-exist with a perfectly natural condition of the

* Numerous references to cases of absence of the ovaries, or their imperfect development, are to be found in Chereau, *Traité des Maladies des Ovaires*, Paris, 1844, p. 73—91; and Meissner, *Frauenkrankheiten*, vol. ii. p. 28; and Dr. Thudicum, of London, has published in the *Monatschrift f. Geburtskunde*, April, 1855, p. 272, a very careful analysis of twenty-one cases, collected from different sources, in which the uterus was either altogether absent, or merely rudimentary.

external organs ; the vagina, which is usually much shorter than natural, terminating in a *cul-de-sac*. The only instance of this malformation which I have seen, existed in a young woman of little more than twenty years of age, who had been married but a few months, and who applied to the late Dr. Hugh Ley, in consequence of some obstacle to complete sexual intercourse. Her appearance was that of a well-developed woman, and her external genitals were quite natural, but the vagina was not above an inch and a-half in length, and terminated in a blind pouch, above which no uterus could be felt, neither could any trace of the organ be discovered on examination by the rectum.

Besides these cases, however, in which the non-appearance of the menses is due to a cause wholly beyond the power of art to remedy, there are others in which the ovaries are present, and perform their functions properly, in which the uterus also exists, and the periodical hæmorrhage takes place from its lining ; but the effused blood finds no means of escape, owing to congenital closure of the os uteri, or to the absence or occlusion of the vagina.

The non-appearance of the menses from any of these causes is unquestionably very rare, and no instance of it has come under my observation. To judge by the recorded accounts of such cases, however, they all present a certain general resemblance to each other, and are all characterized by the occurrence at, or soon after, the ordinary period, of the usual signs of puberty, the appearance of the menses alone excepted. While these are absent, the premonitory symptoms, which in general usher them in, are experienced with even more than ordinary severity. These symptoms subside, and again recur after the lapse of about an ordinary menstrual interval, till, after many months, enlargement of the abdomen becomes apparent, and increases by degrees with each periodical exacerbation of the patient's sufferings.

The history of the patient, the absence of menstruation long after the period when it usually shows itself, and this in spite of the occurrence of the constitutional symptoms which generally

accompany it, when coupled with the progressive enlargement of the abdomen, lead in the course of time to the cause of the symptoms being recognised, and to surgical means being adopted for their removal. Still, there are several circumstances which concur to prevent the abdominal enlargement from becoming apparent so early as might at first have been anticipated. Wherever any mechanical obstacle exists to the flow of the menses, they are almost invariably poured out in far smaller quantity than natural; a fact which I shall have again to refer to when I have to speak of some forms of dysmenorrhœa. In the next place, it must not be supposed that the blood poured out into the uterine cavity collects there uninfluenced by the vital processes which go on in the rest of the economy. On the contrary, the absorbents are very active in getting rid of the effused blood; and microscopic examinations show that it undergoes alterations of the same kind as take place in blood poured out elsewhere, and is removed by a similar process.* But besides this, the blood itself seems in some instances to escape through the fimbriated extremities of the Fallopian tubes into the abdominal cavity, where sometimes it is absorbed without giving rise to any dangerous symptoms, though, in other cases, fatal peritonitis has followed this occurrence.†

One other caution with reference to these cases may not be out of place here, and that concerns the prognosis which we may express with reference to the result of any operation for their cure. Though generally favourable, it yet must be borne in mind, that a fatal result due to the occurrence of inflammation, has sometimes followed an operation as simple as the mere division of an imperforate hymen; and that this has in some instances been produced by blood being poured through the Fallopian tubes into the abdominal cavity; notwithstanding that

* See the interesting account, by Dr. H. Müller, of his examination of the retained menstrual blood in two cases of congenital atresia vaginæ, in Henle and Pfeuffer's *Zeitschrift*, vol. v. 1846, p. 140.

† A series of papers by M. Bernutz, in the *Archives de Médecine* for June, August, and December, 1848, and for November, 1849, bear on this subject, and may be consulted with advantage.

an opening in the vagina existed of ample size to allow of its ready escape in the natural way.*

Attacks of inflammation of the sexual organs in women who have already menstruated, and have even already borne children, are sometimes followed by amenorrhœa; either from abiding mischief inflicted on the ovaria altogether putting a stop to the performance of the function, or from cohesion between the edges of the os uteri, or agglutination of the walls of its cervix, or from injury to the vagina, sloughing of its walls, and subsequent obliteration of its canal. In some of these cases, as in cases of congenital malformation, the menstrual fluid may collect within the cavity of the womb, and require to be evacuated by a surgical proceeding. Mere obstruction of the passages through which the menstrual discharge ought to flow, seems, however, to be sometimes followed by its complete suppression. I have known the menses permanently to cease after severe labour, followed by obliteration of the os uteri, and adhesion between the vaginal walls, even though there was no reason for supposing that either the body of the womb or the ovaries had been the seat of any serious inflammatory mischief.

Though I have made these few remarks on the non-appearance or suppression of the menses from causes requiring surgical interference, I wish to call your attention chiefly to cases of *amenorrhœa from causes which require the interference of the physician.*

But before going into any details on this subject, I will once more remind you, that the mere postponement of the appearance of the menses beyond the time at which they usually show themselves, does not of itself call for interference, does not even warrant anxiety. Like all the other processes of development, so that of the generative system admits of considerable variations in point of time without of necessity passing the limits of health. Indeed, just as one child cuts its first tooth at seven months, and another not till a year old, so one girl may menstruate at four-

* As in a case related by M. Marchand de Massé, in the *Archives de Médecine*, July, 1851.

teen or fifteen years of age, and another not till seventeen, without any obvious reason existing for the early performance of the function in the one case, its tardy accomplishment in the other. Mothers are often anxious about their children, if they do not menstruate till somewhat later than the average period; or even as that period approaches, will often attribute to its influence the most diverse symptoms of disordered health; and will urge on you the employment of emmenagogue medicines as essential to their removal.

Again, the occurrence of serious illness of almost any kind a few months, or even a few years, before the arrival of the period of puberty, will often postpone for a long time the manifestation of its signs, and, in particular, the appearance of the menses. Not long since, I saw a young woman, twenty years of age, who had never menstruated, who, perhaps, never will. Her health had been good until she experienced a severe attack of scarlet fever at the age of fifteen. Her recovery from this illness had been very slow, and she was dwarfed by it in body, and apparently in mind too, and her feeble frame was unequal to the task of bringing her reproductive powers to perfection. In idiots, with whom the imperfect development of mind is generally associated with imperfect development of body, puberty is almost always late in its occurrence. It appears, too, from the elaborate Report on Cretinism, presented to the Sardinian Government in 1848, that in extreme degrees of that condition, the reproductive powers are never developed at all; in less degrees, menstruation appears late, and continues scanty and irregular through life; while even in cases of the slightest description, the average date of the first menstruation is as late as the eighteenth year.*

Further, even when there is no bodily disease, nor any local cause rendering impossible the due performance of the sexual functions, it must yet be borne in mind that those functions are seldom completely performed from the very moment when they give the first indication of their activity. It often happens, that

* *Rapport de la Commission crée par S. M. le Roi de Sardaigne pour étudier le Crétinisme.* 4to, Turin, 1848, see p. 25.

after the first menstruation there is an interval, not of one month, but of two or three, before the menses again make their appearance; or, perhaps, that the signs premonitory of menstruation are followed by a discharge, not of blood, but of mucus, the *menstruæ albæ* of old writers. We know that such discharges, though once regarded as morbid, are far from being necessarily so. If the congestion of the uterus attending the menstrual effort be slight, the quantity of blood poured out from the organ will be but small, and mucus and epithelium corpuscles will then make up the bulk of the discharge. In such a case, however, menstruation may be as really performed, as in the woman from whose sexual organs hæmorrhage takes place with the greatest abundance. Time rarely fails to bring the function, in a few months, to the strictest conformity, in all respects, to those laws by which it is governed in the healthy and fully developed woman.

Still, after every allowance has been made for cases of mere tardy developement, and for those in which the complete performance of the sexual functions is accomplished by degrees, as well as for others in which the activity of the reproductive powers is postponed almost indefinitely by previous bodily ailment, there yet remain a number of instances where the non-accomplishment of the menstrual process, at the time when the changes of puberty are usually completed, is the prominent symptom of disordered health, and seems to be the chief occasion of all the various forms of illness with which it may be associated.

There are *two* different *classes of symptoms*, with one or the other of which the non-appearance of the menses is in these cases usually associated—symptoms differing widely in their general characters, but probably far less widely separated in their essential causes. In the one case the *condition* is apparently of *plethora*, in the *other of anæmia*; but the tendency of the former is to pass into the latter, and this transition often takes place very speedily.

A girl, previously in good health, approaches the time of

puberty ; some of the changes characteristic of it take place, the form assumes the contour of womanhood, and nothing but the occurrence of menstruation is wanting to announce the completion of the change. The menses, however, do not show themselves, but the girl begins to suffer from frequent head-ache and a flushed face, frequent back-ache, pain in the hypogastrium and constipated bowels, a furred tongue and a full pulse, and all these signs of constitutional disorder undergo a marked increase at stated periods of about a month. At length menstruation occurs, though, in all probability, scantily, and attended with much pain, and then for several months together there is no sign of its return ; or perhaps, when the proper period comes round again, the bleeding, instead of taking place, as it ought to do, from the womb, occurs from the stomach, or less frequently from the intestines. The general health was at first probably not seriously disturbed, or at least its disorder was limited to certain times of peculiar suffering, but by degrees the patient becomes habitually ailing, the appetite falls off, the powers of digestion are weakened, the strength becomes unequal to ordinary exertion, the pulse grows feeble and frequent, and the face itself assumes the pallid sallow tinge whence the term *chlorosis* has been selected as the most appropriate designation of the condition ; while the stethoscope detects a peculiar sound attendant on the passage of the blood through the cavities of the heart and along the arterial and venous trunks, and which is known to be significant of changes in its composition, often of diminution of its quantity.

In other instances, the signs of plethora have not at any time been present, but the health, never very robust, fails more and more as the period of puberty approaches ; the feeble pulse, the cold skin, the bloodless countenance, the deficient and depraved appetite come on by degrees, while the outward signs of puberty appear slowly and imperfectly. The frail child never passes completely into womanhood, but fades and droops in the transition stage, through which she has not strength to pass.

In cases of both these kinds there is unquestionably a certain degree of obscurity, though scarcely more than we should find in

the endeavour to explain how in infancy the state of the general health influences dentition, or the process of teething reacts on the general health. The weakly child cuts its teeth painfully, tardily, irregularly ; and there seems to be no essential difference between cases in which the health falls off before any teeth have actually appeared, and those in which the symptoms come on after one or two of the teeth have cut through the gum. In both cases we look beyond the local phenomena for the explanation of the symptoms ; and we do the same in the girl at puberty as in the infant in whom the period of dentition has commenced.

In the case of the girl at puberty there seems, however, to be another element to be taken into consideration, namely, the composition of the blood. Of all the various processes of development which at different times go on in the system, none seem to make such great demands upon the circulating fluid as those which concern the reproductive organs. During pregnancy, even in a healthy woman, certain changes in the blood (a diminution of its red particles, an increase in its watery elements) are of constant occurrence ; while in some instances those changes are so considerable as to give rise to disorder of the general health precisely similar in all its characters to chlorosis.* The growth of the womb, the development of the fœtus, are, indeed, accomplished, for they are subject to a law not easily broken through ; but they are accomplished at the expense of the woman's constitution, and leave her often incapable of suckling her infant, and probably liable to all that class of inflammatory affections, the remote cause of which, as of phlegmasia dolens, for instance, is to be sought in some morbid state of the blood.

To originate a new function, to bring to perfection a hitherto unexercised power, makes larger demands on the strength than

* The merit of the first observations on chlorosis in pregnancy, must be divided between M. Cazeaux, of Paris, and the late Professor von Kiwisch, of Prague, though the claims of the latter appear to be the stronger. The best remarks on the subject will be found in Cazeaux, *Traité des Accouchemens*, Paris, 1850, pp. 291—301 ; Kiwisch, *Die Geburtskunde*, Erlangen, 1851, vol. i. p. 227, and vol. ii. p. 33 ; and Scanzoni, *Lehrbuch der Geburtshilfe*, Vienna, 1849, vol. i. p. 192.

are required for its continued activity. The feeble phthisical child fails, as the time of womanhood approaches, to menstruate, and the signs of chlorosis gradually manifest themselves in her, while in spite of advanced tubercular disease, the grown woman sometimes continues to menstruate with regularity, or even to bring forth children. These, however, are it must be confessed, exceptional occurrences; the tendency of almost all diseases which originate in, or in their course produce important alterations in the blood, is to disturb, to impair, and at length to interrupt the performance of the reproductive functions. In one instance only* out of all the cases of phthisis among women that form the materials of M. Louis' great work on that disease, did menstruation continue up to the time of death; and it suffices to watch with moderate care any one suffering from uterine cancer in order to feel satisfied, that even though hæmorrhage should still occasionally take place from the diseased womb, yet the periodical activity of the reproductive organs ceased when once the cancerous cachexia had become developed.

There is another peculiarity connected with the sexual functions in woman, which must not be left altogether without notice, since it suggests a reason why their tardy or imperfect development, or their subsequent disorder, should be associated with symptoms to which we nowhere else find the slightest analogy. It is a law of the female economy that for some thirty years of life, unless interrupted by pregnancy or its results, a certain quantity of blood shall be periodically discharged from the system. This periodical discharge alone engaged the attention of observers in bygone times, and various hypotheses were framed, which, differing in other respects, yet agreed in this,—that they all regarded the menstrual function as a great depurative agent, a means supplemental to the lungs themselves, for eliminating superfluous carbon from the system. Though we, with the light of modern physiology, are able to look deeper than our predecessors, and can see in the discharge of blood

* Louis, *Recherches sur la Phthisie*, deuxième ed. 8vo, Paris, 1843, p. 334.

from the sexual organs, the outward sign of a still more important process going on within ; we yet must not forget that it cannot be a matter of indifference to the health of a woman whether the excretion of four or six ounces of blood takes place every month, or not ; that the arrest of this phenomenon, or its non-occurrence, cannot but be associated with much constitutional disorder. We find, indeed, that even when with the lapse of years, the time arrives at which the discharge naturally ceases, its cessation is almost invariably followed by a class of symptoms which show that the balance of the circulation has been disturbed, while many months are often needed to complete its readjustment. The liver now has extra work to do in the depuration of the blood, its disorders are now more frequent than at other times, and though hæmorrhages not infrequently take place which relieve the overtaxed organ, yet they often pass the limits of health, and become themselves a fresh cause of suffering, or even an occasion of danger.

But the very accidents to which there is a disposition when menstruation ceases, may also precede its occurrence. If menstruation is postponed beyond the ordinary period, the system suffers in the same way as it often does at its cessation. The same double duty is thrown on the liver, the same disposition to its disorder exists, the same tendency to congestion of different viscera manifests itself, and frequently the same outbursts of hæmorrhage give temporary relief to the congestion, too often also at the expense of the general constitutional vigour. No one who is familiar with the symptoms that are often associated with granular degeneration of the kidney, will be at a loss to understand how local plethora may be associated with an altered and impoverished condition of the circulating fluid, or will fail to see how it may sometimes happen that leeches, purgative medicines, and active exercise, may take that place in the cure of amenorrhœa which tonic remedies, ferruginous preparations, and wine occupy in general.

The exact mode of applying these principles in cases where menstruation has never occurred, must vary much in different

instances, though in all, our chief endeavour must be directed to the establishment of that function through the medium of the general health, rather than by means of remedies acting, or supposed to act, immediately on the sexual system. While then the tardy occurrence of puberty, just as the tardy appearance of the teeth in infancy, furnishes, when unattended by constitutional disorder, no indication for medical interference, the first question that in these cases presents itself is, whether the symptoms which accompany the amenorrhœa are those of simple debility or of that kind of plethora which may yet be associated with an altered and deteriorated state of the circulating fluid.

But though the decision of this point, with a view to the adoption of a suitable constitutional treatment, claims our first attention, there is yet another which must not be wholly lost sight of. When its establishment is long postponed, the performance of the menstrual function generally takes place painfully, difficultly, and for a long time imperfectly, while, as already mentioned, it sometimes happens that the blood which is not poured out from the uterus makes its escape through other channels; such a discharge, too, vicarious of menstruation, sometimes continues to recur for months together, not merely injuring the patient's health, but, through the mysterious influence of habit, offering a serious impediment to the proper performance of the menstrual function. How, and why this is so, I will not pretend to explain. Deficient innervation of the sexual organs has been assumed to be its cause by some; while others have spoken of some special density of the uterine tissue, preventing the ready outflow of blood; or of some peculiar thickness of the blood itself, which therefore could not escape from the pores that otherwise would give it exit. Statements of this kind, however, are but the expression of very crude hypotheses; they add nothing to our knowledge, they do not even present it to us in a clearer form. What we have to do with is the fact, that there are certain periods more or less well marked in the regularity of their return, when a special disorder of the nervous and vascular systems, and various forms of local suffering, referred more or less distinctly to

the womb or the parts adjacent, announce a sort of imperfect menstrual effort, and that at those times various local measures addressed to the uterus are not infrequently succeeded by the establishment of menstruation, though the same measures, if had recourse to at another time, would be altogether unavailing, or even positively mischievous.

Treatment then resolves itself into what is to be done for the improvement of the general health, and what is to be done on special occasions with a particular view to the excitement of the uterine function, while it follows as a necessary corollary, that when no sign of menstrual effort shows itself, then no local measures are indicated. In cases where general debility characterizes the patient's condition, tonics in the widest sense of the term are indicated; and by them I understand not merely tonic medicines, or preparations of iron, though they will almost always be appropriate, but the tonic influence of pure air, healthful pursuits, and exercise short of fatigue. In these cases, too, the one great danger to watch against, is that of the supervention of phthisis, and a winter's residence at Torquay or Ventnor is useful in many instances, not only as a means of guarding the delicate lungs from the cold of many inland places, but also because the warm climate and the sea air appear of themselves to have a beneficial influence in favouring the healthy development of the reproductive system. The constipated state of the bowels, which is so troublesome a symptom in these cases, must be encountered, not by drastic purgatives, but by gentler aperients, among which the watery extract of aloes has a well-merited reputation. In some instances all preparations of iron have the effect of increasing the sluggish state of the intestines, but this difficulty can in general be got rid of by combining the iron with some aperient salt.* At other times the delicate stomach is unable to bear the

*(No. 1.)

R	Ferri Sulphatis	. . .	gr. ix
	Magnesiae Sulphatis	. . .	ʒiij
	Acid. Sulph. dil.	. . .	ʒss
	Syrupi Aurantii	. . .	ʒiv
	Aquæ Carui, ad	. . .	ʒvi—M. ʒj ter quotidie.

mildest ferruginous preparation, and in these circumstances, chalybeate mineral waters will often produce good effects, far beyond what might be anticipated if we regarded merely the quantity of the remedy they contain. The waters of Spa and Pyrmont are especially suitable to cases of this description; the former being the milder and better borne by patients whose digestive power is very feeble. Both these waters are very well prepared at Brighton, but patients of this description benefit as much by the change of scene, the healthful exercise, the sort of busy idleness of a watering place, as by the virtues of the spring to which it owes its reputation.

Even when a state of apparent plethora predominates, much the same kind of treatment is nevertheless appropriate; with the exception, however, that the preparations of iron are often not needed at all, while a much more active system of purgation is generally indicated. A nutritious, though not a stimulating diet, the shower-bath, and horse exercise, are remedies of greater power than any which Apothecaries' Hall contains. The sluggish state of the liver, which constitutes one of the great difficulties that in these cases we have to contend with, must not lead us to the too frequent use of mercurials, especially of mercurial purgatives. There are some exceptional cases, however, where other remedies fail to excite a due secretion of bile, in which the steady employment of small doses of bichloride of mercury, persevered in for several weeks, while a generally tonic plan of treatment in other respects is continued, proves of most essential service.

But while the general health must be ministered to by means such as I have just described, the appearance of any attempt at menstruation, as it indicates a different object to be aimed at, so calls for an immediate change in the remedies to be employed.

The patient should be kept quiet, and if there be any considerable suffering, or much disturbance of the circulation, it is desirable that she should remain in bed, while the hot hip-bath, night and morning, rendered still more stimulating in cases

where the local pain is not very considerable, by the addition of some mustard, will often have the effect of inducing the menstrual flux. It is at this time that the stimulant diuretics, such as nitrous ether, turpentine, spirits of juniper, or the domestic emmenagogue, gin, sometimes prove useful, and by increasing the congestion of the pelvic viscera, induce a hæmorrhage from the uterus, and relieve the patient from much suffering. Much care, however, is needed in the employment of any of these remedies; while all violent measures, such as the administration of cantharides, or of the oil of savin in large doses, or very powerful local stimulants, such as vaginal injections of liquor ammoniæ mixed with milk, or the introduction of nitrate of silver into the uterine cavity, by means of Lallemand's *porte-caustique*, appear to me to deserve reprobation, as both uncertain and unsafe. Electricity, applied by means of the ordinary electro-magnetic apparatus, one disk being placed over the pubes and the other over the sacrum, has in some cases been of service, though its results, just as when employed for other purposes, appear to vary much, and causelessly. It was at one time anticipated that the ergot of rye would prove a very valuable emmenagogue, and indeed it was employed as a popular means of inducing menstruation long before its introduction into obstetric practice. Though it has been tried, however, in various forms of powder, tincture, infusion, and essence, and though experiments have been made with its essential principle, the *ergotine*, yet its peculiar power over the muscular activity of the womb does not appear to extend to any other function of the sexual organs.

In some instances, the pain experienced in the uterine region with the return of each menstrual period, is very severe indeed; and in such cases, while stimulating hip-baths are out of place, the application of leeches to the hypogastrium not only relieves the pain, but is often followed by the occurrence of menstruation. The explanation that used to be given of this fact, founded on the circumstance that excessive congestion of a secretory organ often puts a stop to its activity, is scarcely applicable now that we know the menstrual discharge to be a simple hæmor-

rhage, not a secretion. The fact, however, still holds good, and the practice founded on it is worth remembering.

I have already referred to the occurrence of hæmorrhage from various organs as an occasional attendant on amenorrhœa, and have suggested an explanation of its cause. Medical writings* are full of illustrations of this vicarious menstruation, as it is often, though not quite correctly, termed; and from them it appears that the hæmorrhages may occur, not merely from any of the mucous surfaces, as the stomach, intestinal canal, or air-passages, but also from any casual wound, from the surface of an ulcer, from the nipple, from the eye; in short, from almost any conceivable part of the body. Now it is no part of my object to occupy your time with a detail of these mere medical wonders; but there are several things with reference to them which I wish you to bear in mind. The first is, that after the arrival of the period of puberty, the non-appearance of the menses, or their accidental suppression, is likely to be followed by occasional outbursts of hæmorrhage, which by no means invariably correspond with any real activity of the sexual organs, or observe any distinct periodicity of return. Next, it is to be remembered that such discharges, not being genuine menstruation, may nevertheless take place from the uterus, and amenorrhœa and a seeming menorrhagia may alternate with each other. Such hæmorrhage, too, may be extremely profuse; and even within my own observation it proved fatal to a young lady, in whom it succeeded long-continued suppression of the menses, and whose uterus, as far as could be ascertained by examination during life, was perfectly healthy. Lastly, the occurrence of this hæmorrhage does not in any material respect alter the indications which we are to pursue in our treatment, or the means by which we must endeavour to accomplish them. If so profuse as to be hazardous, the discharge must be checked by appropriate means; but it is to the state of the general health, and the excitement of the true menstrual func-

* Abundant references may be found in Brierre de Boismont, *De la Menstruation*, &c. 8vo, Paris, 1842, chap. vi. p. 374; and in Meissner's *Frauenkrankheiten*, 8vo, Leipsig, 1845, vol. ii. p. 860.

tion, that our chief care must be directed. Habit, "the memory of the body,"* as John Hunter beautifully terms it, while it plays a prominent part in many of the functions of the animal economy, exerts over none so powerful an influence as over those of the sexual system of the female. The hæmorrhage vicarious of menstruation, in its first occurrence, perhaps the result of mere accident, needs but to return two or three times for its cure to become difficult. After a time, even though the general health may be perfectly good, and though the ovaries, as far as we can tell, perform their office properly, yet with each return of that excitement of the circulation which should relieve itself through the medium of the uterus, the long-established habit interferes, and bleeding takes place from the lungs or from the stomach, or from the surface of the body, instead of from the womb.

But the application of this fact is wider than to the mere determining the prognosis of cases of hæmorrhage vicarious of menstruation, though it will at once be obvious that they admit of cure easily, or with difficulty, in almost exact proportion to their duration. The principle which it involves is to be borne in mind in the management of all the ailments that disturb the menstrual function. It is not enough to take precautions till menstruation has for the first time occurred; the period for its return should, even in the healthiest girl, be watched for, and all previous precautions should be once more repeated; and this should be done again and again, until at length the *habit* of regular, healthy menstruation is established; and if this be once secured, the risks of its subsequent disorder will be very much lessened. Need I say that this truth bears with ten-fold force on all cases in which menstruation has been tardily, painfully, or difficultly accomplished; for in these the bad habit has to be broken through, and a new one formed. If this be not accomplished during the first few years of womanhood, it will, in all probability, never be attained.

* *Works*, Palmer's edition, vol. i. p. 274.

LECTURE IV.

MENSTRUATION AND ITS DISORDERS.

AMENORRHŒA, continued—Suppression of the menses—Their premature cessation—Irregularities before final extinction of function—Various causes suspending the menses—Treatment.

MENORRHAGIA—Its two principal causes—1st, constitutional; 2nd, local—illustrations of each.

Treatment of both classes of cases—general precautions—cases requiring antiphlogistic measures—cases requiring tonics and astringents—local remedies—conditions calling for the plug, and for intra-uterine injections.

WE were engaged during the last Lecture with the study of those cases in which the menstrual discharge has never made its appearance. Another, and equally important class, still remains for consideration, in which *menstruation* is either *interrupted* or *suppressed*.

It is of course out of the question to attempt an examination of all the various circumstances that may give rise to suppression of the menses, or that may lead to their permanent cessation; for a very large number both of constitutional disorders as well as of local diseases tend, directly to produce this result. Reference has already been made to the remarkable influence of phthisis in its more advanced stages in leading to suppression of the menses, and many other cachectic diseases exert a similar influence on the menstrual function; while severe uterine or ovarian inflammation, various forms of ovarian degeneration or of uterine tumour, often suspend menstruation for months together, sometimes put a final stop to its occurrence, many years before, in the natural course of events, the sexual powers would lose their vigour.

But besides those cases in which a definite reason can be assigned for the arrest or cessation of the menstrual discharge,

there are others occasionally met with, in which it disappears as the result of a premature senescence, just as we have observed it sometimes to come on late in life in consequence of the tardy occurrence of puberty. Thus while the average duration of the menstrual function is about thirty years, and the age of its cessation in the majority of instances, at or a little after forty-five, it has been known to continue less than ten years, and to cease before the age of thirty, and this, too, without any peculiarity in the history of the woman suggesting an adequate reason for so wide a deviation from the ordinary rule.*

To a great extent the date of the cessation of the menstrual function, is, I apprehend, a matter of indifference, and just as some persons of our own sex retain sexual vigour to extreme old age, while with others it soon grows feeble or becomes sluggish, so women may long retain their reproductive powers, or may lose them early, without their health being better in the one instance, or less good in the other.

Cases, however, are sometimes met with, in which a permanent cessation of the menstrual function is associated with the same state of health, the same condition of general debility, as I have already referred to when speaking of the non-appearance of the menses, and accompanied with all that category of symptoms which constitutes chlorosis. In these circumstances the same general treatment, the same chalybeate remedies as are suited to the young girl, find their fit application in the illness of the matron, and generally with the result of improving the health and reproducing the menstruation. Sometimes, indeed, though the health amends under appropriate means, yet the sexual func-

* Elaborate tables showing the duration of menstruation, and the age at its cessation, are to be found in Brierre de Boismont, *op. cit.*, pp. 209, 211; in Mr. Whitehead's *Treatise on Sterility and Abortion*, &c., 8vo, London, 1847, p. 150; and in Dr. Tilt's work on the *Diseases of Women*, 8vo, 2nd ed., London, 1853, pp. 44 and 46. My own observations on the subject, though they have not furnished me with any instances of the cessation of the menses under thirty, yet correspond with the others in showing the differences to be very wide indeed in this respect between different and apparently equally healthy women. In my cases the age at cessation of the menses varied from thirty-one to fifty-eight, and the duration of the function from twelve to thirty-eight years.

tions are never re-established ; a result with which, although far from usual, it is nevertheless important that you should be acquainted.

But there are many instances in which, though menstruation is not finally arrested, yet the function is suspended for a time, and this accident is attended by very various degrees of constitutional disorder. At the commencement of sexual activity and towards its close, menstruation is often irregular, in the one instance owing to the organs not having arrived at perfection, in the other owing to the gradual loss of their power. So frequent, indeed, is this irregular menstruation as a prelude to its final cessation, that women have a homely phrase, the "dodging time," by which they designate the period of its occurrence. I have already told you how in the former case you must watch over the function, and endeavour to bring on by degrees its regular performance. In the latter, you must confine your attention to the general health, without endeavouring to re-excite the activity of organs which are thus giving evidence of their waning powers.

The irregular menstruation in the above cases is almost a physiological occurrence ; its suppression, in other circumstances, may be due to a great variety of causes ; it may be owing to pregnancy ; to pregnancy, unsuspected by the person who seeks your advice. I refer to this chiefly in order to remind you that in every case of causeless suppression of the menses, just as in every case of abdominal tumour in women, you must bear in mind the possibility of pregnancy. I do not mean by this that you are to doubt every woman's word, or to question every woman's chastity, even in thought, but that, bearing in mind how little you can know of the intimate history of many of your patients, you must not allow your respect as men, your gallantry as gentlemen, to make you quite lose sight of what may much import you as physicians.

Independently of pregnancy, however, mere sexual intercourse not infrequently arrests menstruation for a time, so that in recently married women, the existence of pregnancy is sometimes

suspected for two or three months, till, at the end of that time, the hopes are dissipated by the unwelcome return of the menstrual discharge. Habitual sexual excesses, though they sometimes have an opposite effect, and induce menorrhagia, yet, in the great majority of cases, suppress menstruation altogether, or render its return irregular, and the quantity of discharge small.*

Any sudden shock, either acting locally on the uterine organs, as the application of cold to the vulva, or through the medium of the general system, as when a person gets wet footed, or suffers during menstruation from exposure to wet or cold, will often check the menstrual flux. In many of these cases, too, the sudden arrest of the discharge is followed by extreme uterine pain and tenderness, by all the symptoms of intense uterine congestion, sometimes, indeed, by actual uterine inflammation. The mind, too, reacts upon the body, as we see perpetually illustrated in the case even of those functions that might be supposed most independent of its influence, and many instances might be related of sudden grief, or fear, or anger, at once arresting the menstrual discharge.

But various though its causes may be, yet the treatment of suppression of the menses rests for the most part on very simple principles, and those the same in almost all instances. Two points require attention; first, to re-excite menstruation at once, if possible; second, to provide for its re-establishment when the proper period once more comes round. If the hot hip-bath, or a warm bath, bed, and a cordial or diaphoretic, fail to reproduce the menses when suddenly checked by cold, or by any other cause, we must wait patiently till the next menstrual period comes round, unless indeed urgent symptoms supervene, betokening great congestion, or inflammation of the uterus, and they may require free local depletion, or even venesection, and other active measures to arrest their progress.

With the return of the ensuing menstrual period, the greatest

* See on this subject the remarks of M. Parent-Duchâtelet. *De la Prostitution dans la Ville de Paris*, vol. i. p. 228.

care must be taken to secure the proper performance of the function, by the use of all those means which I mentioned in my last lecture, when speaking of amenorrhœa. The importance of doing this cannot be overrated, since many cases of habitual dysmenorrhœa, due probably to a state of chronic irritation or inflammation of the ovaries, date back to some accidental suppression of the menses; and the suffering has been confirmed by want of due care at the return of the next few periods.

It is no part of my plan to occupy your time with passing minutely over ground already often trod before; and, therefore, in considering the different disorders of the menstrual function, I shall content myself with pointing out to you the grand principles by which your management of them must be regulated, rather than attempt to enter into detail concerning any.

This being so, we may now pass from the consideration of cases in which the menses have been scanty, or suppressed, or have failed to appear in due time, to the study of disorders of the menstrual function of an exactly opposite character, to cases of what is termed *menorrhagia*, or excessive menstruation.

This excess of menstruation may show itself either in the great profuseness of the flow, or in its long duration, or in its frequent return. It is, as you will find hereafter, by no means a matter of indifference, in which of these respects the excessive menstruation first or chiefly shows itself, since from these differences important inferences may often be drawn, both as to the cause of the ailment and its means of cure. It must, however, be borne in mind, that menstruation seldom continues long to be excessive in one respect alone; but if the menorrhagia be not speedily checked, the patient will menstruate not only in greater quantity, but for a longer time, and at shorter intervals than natural.

Divisions and subdivisions of menorrhagia into many different kinds, have been needlessly multiplied. The only classification that seems to me of real practical utility, is that which recognises two forms, depending, either—

1st. On some cause seated in the constitution generally.

2nd. On some affection of the sexual system.

This distinction should never be lost sight of in practice, though we may seldom meet with instances in which the actual line of demarcation is drawn with the same precision as we attempt to observe in our nosologies.

One caution is, perhaps, worth giving, before I say anything more about menorrhagia. It is, that every excessive hæmorrhage from the unimpregnated uterus, during the years of sexual activity, is not necessarily menorrhagia. Women themselves are apt so to regard all losses of blood during that period of their life, and practitioners are too often guilty of the same oversight. Menorrhagia is an excess of menstrual discharge, an over-abundant hæmorrhage, the cause of which, in the first instance, is that congestion of the sexual organs which attends the maturation and escape of an ovule from the ovary. As I mentioned yesterday, outbursts of bleeding may take place from the womb in some cases where the menses have been long suppressed, affording relief to the system, or even by their excess, jeopardizing the patient's well-being, and this with no more real reference to the function of which menstruation is the sign, than exists in a case of hæmorrhage from the bowels, or of bleeding from hæmorrhoids. In the same way, too, a patient may bleed to death from a cancer of the womb, or from a polypus, or fibrous tumour of that organ, and yet such hæmorrhage may be no real menorrhagia.

In this case again the distinction cannot always be drawn, for the incipient uterine disease may at first have betrayed its existence by the excessive congestion of the sexual system, and consequent abundant discharge of blood at a menstrual period, but with the advance of the mischief, bleeding may take place at any time, and independent of any special occasion of uterine excitement. I need not say that a distinction does not cease to be useful because it is not always practicable to make it.

But to return,* *menorrhagia* was stated to *depend* in some

* Premature menstruation, *menstruatio præcox*, has been classed by some writers as a form of menorrhagia. I have preferred, however, passing over the subject, since cases of precocious puberty in either sex concern the physiologist

instances on *causes acting through the medium of the general system*. Thus, for instance, some years ago I saw a widow lady of about forty years of age, whose time was divided between a sojourn in this country for two or three months at a time and a residence during the other part of the year in a somewhat damp situation in Ireland. Menstruation was always regular in the time of its recurrence and natural in quantity during her stay in this country, but for some two or three years her return to Ireland had been followed by an excessively profuse discharge at each menstrual period, and by its continuance for more than twice as long as usual; symptoms which subsided once more after a few weeks stay in England. How the change of climate acted in this case, it is not possible to say, though illustrations of a somewhat similar influence of locality in modifying the uterine functions are far from unusual.

Cases are sometimes met with, in which an altered state of the circulating fluid, such as even our rough chemistry can detect, coexists with and appears to be the exciting cause of menorrhagia. In cases of granular degeneration of the kidneys, menorrhagia is far from being of uncommon occurrence. The altered, attenuated blood seems to escape more readily than natural from the uterine vessels when they are congested at the

rather than the physician. Two remarks only suggest themselves as in place here. First, that those instances in which the sexual system has been stimulated to premature activity by various injurious influences both physical and moral, are not genuine cases of precocious puberty; and second, that neither are all cases to be so regarded in which once, or oftener, sanguineous discharges have taken place from the sexual organs of infants and very young female children.

Cases of genuine precocious puberty in which the whole body has undergone in early childhood the various changes which usually take place in later years, and announce the arrival of womanhood, are far less common than the numerous references to be found to their occurrence in medical works would at first lead one to imagine. A very sound criticism on many of the earlier cases is to be found in Naegle, *Abhandlungen*, &c., *aus dem Gebiete der Krankheiten des weiblichen Geschlechtes*, 8vo, Mainz, 1812, p. 312—328. Numerous references, though some of them are of doubtful authenticity, are to be found in Meissner, *Frauenkrankheiten*, vol. ii. 8vo, Leipsig, 1845, p. 723—739; and in Busch, *Das Geschlechtsleben der Weibes*, vol. iv. 8vo, Leipsig, 1843, § 243, pp. 459—465; and, lastly, a very interesting case, with very sensible remarks on many previous histories of cases of premature menstruation, will be found in a small tract of 47 pages, by Dr. Reuter, *Ueber die Präcocität der Menstruation*, 8vo, Wiesbaden, 1846.

return of a menstrual period ; and three or four cases of supposed disease of the womb have come under my notice, in which the most careful examination could detect no local cause for the profuse menstruation, but in which the urine was discovered to be loaded with albumen. The hint which this fact suggests as to the expediency of examining the urine, even though no symptoms should seem to point to the existence of renal disease, is worth remembering, and the test tube will help to clear up many an obscure case of supposed uterine ailment. You are not to be specialists, even though chance should lead you to have most to do with one special class of ailments, but you are to be physicians, and in proportion as you learn to estimate aright the influence of the disorders of one part on the functions of another, will you be likely to prove good and successful practitioners in the treatment even of local diseases.

Somewhat similar in their nature are those cases of menorrhagia met with most frequently towards the decline of sexual activity, in which with general disposition to plethora of the abdominal vessels, with a sluggish liver, and constipated bowels, menstruation is sometimes irregular in its occurrence, often anticipates the proper date of its return, and is often excessive in its quantity. Such hæmorrhages are not of necessity menstrual, though they usually take place at or near a menstrual period, the congestion of the womb which then exists favouring the occurrence of profuse bleeding at that time from the uterus rather than from any other organ.

A tendency to hæmorrhage is a frequent attendant on many conditions of debility, and we look, probably with propriety, on some change and deterioration in the circulating fluid as accounting both for the general feebleness, and for the local accident. In women whose strength has been exhausted, or whose blood has been impoverished by prolonged lactation, the reappearance of the menses often takes place with an undue abundance of discharge, often in such quantity as to constitute real menorrhagia ; while in many instances the long duration of the hæmorrhage is at least as trying to the patient as the profuseness with which

it flows. Here then is another illustration of menorrhagia from constitutional causes.

But though in cases such as these, the sexual system is not the part first in fault, yet no serious disorder of its functions can take place, still less can recur frequently, without being accompanied by some sign of uterine ailment. A sense of weight in the pelvis, a feeling of bearing down and sympathetic pains in the back, tell that the uterus is heavier than natural, and that its vessels from habitual congestion are overloaded with blood; while the mucous discharge which persists in the intervals between the menstrual periods, is but the effect of the same condition, which, increased at the time of each ovarian excitement, gives rise then to the profuse outflow of blood. Moreover, since the menstrual effort returns every twenty-eight days, the congested womb has not time to recover itself between each period. The blood has scarcely ceased to flow before it is again determined to the organ by a renewed ovarian excitement; and, its tissue being looser, its vessels more dilated on each succeeding occasion, allow more and more readily of the escape of blood, till at length no interval is left at all, but the flow goes on constantly, and menstruation is marked only by a larger hæmorrhage than takes place at other times. The influence of habit, too, to which I referred when speaking of amenorrhœa, is not less marked in cases of menorrhagia, tending to perpetuate the evil, and to render its removal difficult, long after the cause to which it was originally due has ceased to be in action.

Some inferences applicable to practice may be deduced from what has already been said.

1st. The importance of determining whether the cause of the menorrhagia is to be sought in the state of the general system or of the sexual organs.

2nd. The necessity of bearing in mind that even when the ailment depends on a constitutional cause, it will yet be attended by certain local symptoms; and further, that the latter may persist long after the removal of the former.

3rd. It follows as a corollary from the two preceding state-

ments that it is essential in every case of long-continued menorrhagia, to determine by careful examination the presence or absence of local disease ; and this the rather since the early stages of organic uterine affections are not only often accompanied by menorrhagia, but also are often unattended by any other symptom.

But there is a *second* class of cases in which *menorrhagia* occurs as the *result of some cause acting directly on the sexual system*. We meet sometimes with instances of what seems like a special susceptibility of the sexual system, in which any sudden excitement, even though unconnected with the sexual functions, is followed by hæmorrhage, lasting perhaps only for a few hours, or for a day, but sometimes continuing longer, and even passing into regular menorrhagia ; while in all patients who are liable to this accident, menstruation is almost invariably profuse. A similar effect is produced by causes acting directly on the sexual system, and hence, while in some cases we find the unaccustomed stimulus of sexual intercourse lead to suppression of the menses, we also observe it in other instances followed by their excess. Menstruation in these cases generally continues to observe its proper periods of return, but lasts on each occasion much longer than natural ; while abstinence from intercourse for a season, and moderate use of it afterwards, are almost always followed by the menstruation resuming its natural character. More difficult of cure, however, are those cases in which, from some cause or other, the marriage is sterile, and especially those in which, from disparity of years, or from constitutional feebleness on the husband's part, the act is but imperfectly accomplished. In these circumstances a sort of chronic ovarian irritation and chronic congestion of the womb are kept up, which lead to a degree of hypertrophy of the uterine substance and to profuse bleeding from its lining membrane. Menorrhagia too sometimes occurs in prostitutes from the constant over-excitement of their sexual organs, and its cure is almost impossible by any means short of the complete abandonment of their habits.

The local causes, however, which may give rise to menorrhagia are manifold. Whatever produces undue ovarian excitement, whatever causes undue uterine congestion, is likely to occasion it, while any circumstance that renders the womb larger, its texture looser, its vessels of greater size than usual, by just so much facilitates its occurrence. Premature exertion after delivery is often followed by hæmorrhage. If this hæmorrhage is not speedily checked by treatment, and its return guarded against by watchful care, it soon assumes the menstrual type, and soon also becomes excessive in quantity from the very circumstance that it takes place from an organ in which the processes of involution are as yet incomplete, and whose vascular supply is much more abundant than it would be if menstruation were delayed till the lapse of the ordinary period after delivery. From a similar cause the foundation of menorrhagia is often laid in a want of due care at the time of the first appearance of the menses after a miscarriage ; an occasion, by the bye, on which you should not fail to impress on your patient the need for what may seem to be almost exaggerated precaution. This condition of the womb, too, sometimes persists for long periods after the delivery or the miscarriage to which it was originally due ; or in weakly persons exists even independent of any appreciable cause, and this to so great an extent that the uterine sound may sometimes discover the length of the uterine cavity to vary as much as half an inch within the course of a single week. This state of relaxation of the tissue of the womb likewise coexists very frequently with a granular, abraded, or ulcerated condition of the os uteri ; local affections which, slight though they may seem, yet help to keep up an habitual congestion of the womb, and thus furnish an ever-present occasion of menorrhagia.

Other causes still might be enumerated as giving rise to excessive menstruation, such as blows or other injuries inflicted on the uterus during a menstrual period. Inflammation of the uterus, especially, I believe, of its lining membrane, has this effect in very many instances, and not only produces it on a single occasion, but gives rise to a state in which menorrhagia

often becomes habitual. Misplacements of the uterus, as retroflexion or antelexion, are often associated with it, and various organic diseases, as polypus, fibrous tumour, or cancer, which eventually produce constant hæmorrhages, at first manifest their existence in many cases by an increased flow of blood at the ordinary menstrual period.

Lastly, various affections of the ovaries are attended by the same result, and misplacement of those organs, their inflammation, or their degeneration, is often characterized by abundant and over-frequent menstruation. Each of these causes of menorrhagia, however, as well as all the different affections of the uterus itself, must engage our attention at a future day, and may therefore be passed over now without further notice.

In entering on the consideration of the *treatment* of menorrhagia, it is almost superfluous to observe that this can be by no means uniform, but must differ almost as widely as the various causes to which the excessive loss of blood is due.

In every instance, however, we have to fulfil two indications, of which sometimes the one, sometimes the other is the more urgent; namely, to arrest the present hæmorrhage, and to remove the cause on which it depends. The principles which must guide us in endeavouring to accomplish the latter are too obvious to need more than the very briefest reference. In those patients, for instance, in whom the menorrhagia is but a sign and a consequence of general debility, the tonic remedies and ferruginous preparations which tend to invigorate the health and to improve the composition of the blood, will of themselves have a most powerful influence in checking the excessive discharge at the menstrual period. In some of these cases, too, the menstruation is excessive relatively to the patient's strength, rather than absolutely, compared with the quantity of blood lost by women in general at a menstrual period. This is so not infrequently with women in whom menstruation appears during suckling; and in such circumstances it usually suffices to wean the child, and to give some simple tonic in order to effect the patient's cure. Less amenable to treatment, of course, are those

cases in which the alteration in the circulating fluid depends on some deep-seated cause, such, for instance, as exists in cases of granular degeneration of the kidney; though in such it is at once obvious that our attention must be directed chiefly, to something more than the mere suppression of the present hæmorrhage.

Again, the excessive hæmorrhage that occurs in connexion with a state of general plethora of the abdominal vessels, showing itself in a disposition to hæmorrhoids, a sluggish action of the liver, and in a constipated state of the bowels (a condition most frequent towards the decline of the sexual powers), admits less of remedies immediately addressed to the suppression of the bleeding than of attempts to remove it by indirect means. These are the cases in which a carefully regulated diet, whence all stimulants should be banished, great attention to the bowels, with the habitual employment of small doses of saline aperients, such as the sulphate of magnesia, the potassio-tartrate of soda, or some of the aperient mineral waters, as the Pullna water, for instance, continued for weeks together, will seldom fail to be successful. In such cases, too, as well as in those of younger women, in whom, with a general state of plethora, and rather sluggish condition of the bowels, the menses are with every month becoming more and more profuse, an active aperient taken the day before their expected occurrence often has a most remarkable influence in restraining the excessive hæmorrhage.

But there are many cases in which the sexual organs themselves either are the immediate cause of the menorrhagia, or in which changes that they have undergone tend in great measure to perpetuate or to aggravate it. In all the more important forms of uterine or ovarian disease, the menorrhagia is but one out of several symptoms, each of which may claim our attention and necessitate our interference. Here, then, the empirical recourse to measures for checking the hæmorrhage may be either out of place or useless; and just as the peculiar state of the constitution calls for consideration, in some cases, so the precise character of the local ailment requires investigation in others.

Not to enter, however, into details which would occupy much time now, and must yet of necessity be incomplete, I will endeavour to furnish you with some general rules applicable to cases of menorrhagia in general, and then to give you special directions for the management of those in which the amount of the bleeding, or its persistencé, or the state of the patient's health, requires that decided measures should be adopted for its suppression.

Under all varieties of condition, there are certain precautions which the known liability of any woman to menorrhagia should lead her to adopt with the return of each menstrual period. First among these rules may be mentioned the strict observance of the horizontal posture, from the commencement of the discharge, and the maintenance of it till the discharge ceases. If with this be associated due care that the bowels are not constipated, and the pelvic viscera consequently not congested at the onset of the period, it is surprising how many cases of obstinate menorrhagia will be relieved in a very short time, and the hæmorrhage restrained within proper limits, and this even though all kinds of remedies had previously been long and fruitlessly employed. To secure this benefit, however, it is necessary that the precaution be repeated for two or three successive periods, and that afterwards a much greater degree of care should be taken at the return of each menstrual period than many women are ready to observe.

But while these precautionary measures are alike applicable to all forms of menorrhagia, the management of the case in other respects differs completely, according to whether the hæmorrhage assumes an active or a passive character. In the latter case, we employ astringent remedies both generally and locally, and this with a confident expectation of success; in the former, astringents would be out of place, and we rely on antiphlogistic measures, of greater or less activity, according to the urgency of the symptoms.

There is one variety of excessive menstruation dependent on a state of intense uterine congestion, if not on actual inflammation

of the organ, in which the profuse loss of blood is associated with general febrile disturbance of the system, with a very distressing sense of weight and bearing down, great abdominal and uterine tenderness, together with pains of a periodical character, like those of threatening miscarriage, or of the early stage of labour. These symptoms, to which the name of *metritis hæmorrhagica* has been applied by some continental writers, require both for their relief as well as for the suppression of the hæmorrhage, the abstraction of blood from the arm, or the free application of leeches over the lower part of the abdomen ; measures which are most efficacious if taken just before the occurrence of a menstrual period, or within the first day or two from the commencement of the discharge. But there are besides, other cases in which, though the symptoms are less urgent, yet any attempt directly to stop the discharge would be equally unsuitable. Such are all those instances of menorrhagia that are associated with a state of general plethora, where a flushed face, and a full pulse, and an aching head, at the commencement of the period, become by degrees relieved as the blood flows, and where the hæmorrhage seems to be almost salutary, were it not that it tends to become excessive, and tends also to become habitual, persisting long after the cause which first occasioned it has ceased. In these cases a modified antiphlogistic treatment must be pursued ; small doses of the sulphate of magnesia with sulphuric acid, and the tincture of henbane, if much uterine pain be present ; or the nitrate of potash,* with tincture of digitalis, must be given, and will scarcely ever fail to check the bleeding.

Cases presenting an active character, however, or calling for any approach to antiphlogistic measures in their treatment, are decidedly exceptional. Menorrhagia is most commonly met with

* (No. 2.)		(No. 3.)	
R	Magnesie Sulphatis . ʒiv	R	Potassæ Nitratis . . ʒj
	Acid. Sulph. diluti . ʒj		Tinct. Digitalis . . ʒxl
	Tinct. Hyosciami . ʒij		Syrupi Limonum . ʒiv
	Aquæ Cinnamomi . ʒjss		Aquæ puræ . . . ʒvss
	Aquæ puræ . . . ʒiv		M. ft. mist., cujus sumat cochl. ij
	M. ft. mist., cujus sumat cochl. ij		ampla 4tâ quâque horâ.
	ampla 4tâ quâque horâ.		

in conjunction with a state of debility, and the obvious indication in the majority of instances is to check the bleeding as promptly and by as direct means as we can. With this view it is desirable, in all cases of passive menorrhagia, particularly when the affection has been of long standing, to employ astringent remedies, such as alum, gallic acid, lead, or matrico, from the moment when the discharge commences, and not to delay their administration until the hæmorrhage has become considerable. Of the four remedies which I have just mentioned, the gallic acid and the matrico are those in which I have the greatest confidence, while I place the least reliance on the acetate of lead.* I do not know, however, of any special indication by which we can judge beforehand of the probability of one or the other remedy proving specially applicable in any particular case, but are accustomed to employ each in succession, provided one should fail to produce the desired effect.

The ergot of rye has been employed by some practitioners in cases of menorrhagia, and this not simply on account of its action on the uterus, but also from its supposed styptic property. I cannot say, however, that it has seemed to me possessed of any power of arresting uterine hæmorrhage, independent of that which it exerts through the medium of the muscular contractions of the womb, while even as a means of exciting them it has in my

* (No. 4.)

R Aluminis ʒjss
Solve in
Aquæ puræ ʒv
adde
Tinct. Cinnamomi co.
Syrupi Papav. alb. aa . ʒiv
M. ft. mist., cujus sumat cochl. ij
magna 3tiâ vel 4tâ quâque horâ.

(No. 5.)

R Acidi Gallici gt. xlvij
Syrupi simplicis ʒiv
Aq. Cinnamomi ʒijss
Aquæ puræ ʒiij
M. ft. mist., sumat cochl. ij magna 4tâ
quâque horâ.

(No. 6.)

R Plumbi Acetatis ʒss
Aceti destillati ʒij
Tinct. Opii ℥xx
Syrupi Papav. alb. . . . ʒiv
Aquæ puræ, ad ʒvi
M. ft. mist., sumat cochl. ij magna 4tâ
quâque horâ.

(No. 7.)

R Fol. Piperis Angustifoliæ ʒss
Aquæ ferventis ʒvi
macera per horas ij et cola.
R Liquor Colati ʒvss
Tinct. Card. co. . . . ʒiv
M. ft. mist., sumat cyathum vinosum
4tâ quâque horâ.

hands failed far oftener than it has succeeded. Of all preparations of the drug, the infusion of zij of bruised ergot in zvi of boiling water, is the only one in which I am disposed to place much confidence, all the different essences and tinctures which are in such general use, having seemed to be almost equally inert. Of the essential principle of the ergotine I have no experience, but I know that it has not justified the high expectations of the French physicians who first introduced it into practice.

At a recent meeting of the Medico-Chirurgical Society, a very interesting paper by Mr. Dickinson, which will doubtless appear in the thirty-ninth volume of its Transactions, was read, on the use of digitalis in cases of menorrhagia, and other forms of hæmorrhage from the uterus. Dr. Lee, in whose practice at St. George's Hospital this remedy was extensively employed, believes that it exerts a specific action on the uterus itself, as decided as that of the ergot of rye, and apparently even more certain. The infusion of digitalis in half ounce or ounce doses was followed by uterine pain, by the expulsion of coagula, and by the diminution, or complete suppression of the hæmorrhage; and the cases by which these statements are supported appear to have been very carefully observed. My own experience of the remedy has been too limited to enable me to form a decided opinion on its merits; though hitherto I have been disappointed in the results which I have obtained.

In the great majority of instances the observation of precautions and the employment of internal remedies such as I have recommended, suffice to restrain the loss of blood within safe limits; and it then remains only by judicious treatment in the interval, to guard against the recurrence of hæmorrhage at the next menstrual period. But now and then we meet with cases in which these measures prove nearly useless, or in which the loss of blood on former occasions has already been so considerable, or so often repeated, as to render each ounce of almost inestimable importance for the maintenance of the patient's health, possibly even for the preservation of her life. Rarely though it happens, you must yet bear in mind that women sometimes die

from loss of blood at a menstrual period, and this wholly independent of uterine disease. Two instances of this occurrence have come under my notice; I have already referred to one case, and the second was even more important, since the person was not only in previously good health, but an examination after death ascertained that not only her uterus, but every organ of her body was free from any sign of disease. She was a young woman who, having been sentenced to transportation for some offence committed in Scotland, was sent by ship during a stormy season from Edinburgh to London. Menstruation appeared during the voyage, but her exhaustion was not unnaturally attributed in great measure to sea sickness. She improved on being landed, and though menstruation continued profuse, yet she made no complaint to the officers of the prison. At length having fainted one day, she was removed to the infirmary of the institution. No profuse loss of blood took place during the three or four days that she was there, but only a slight draining which went on in spite both of astringent remedies and of cold applications, and under which she sank exhausted. A small coagulum was found within the uterus, but nowhere was there any trace of disease.

Now the bare possibility of any such occurrence happening is reason enough for watching most anxiously every case of very profuse menstruation, and for being ready with appropriate means to combat the symptoms as they increase in urgency. One of the first and most obvious means of checking bleeding from any part consists in the application of cold. After the menses then have continued for two or three days, provided they do not show any disposition to abate, the loins and vulva should be sponged every few hours with cold water, and the patient should besides have an enema of about four ounces of cold water night and morning. If in spite of these means, which, however are generally successful, the loss of blood should still continue, wet cloths must be applied to the vulva, and astringent injections thrown into the vagina, for which purpose I know of nothing better than the infusion of matico.

If even these means should fail, there remain then but two resources, the plugging the vagina, and the injecting the cavity of the uterus itself. The expediency of resorting to either of these measures must be determined by a careful consideration of the patient's general condition, quite as much as by the mere amount of the hæmorrhage. It is not indeed in general while blood is flowing profusely, that the necessity for their employment arises, but at a later period, when with great depression of the vital powers, blood still drains away in quantities so small as at another time would be of no importance.

I need give you no special directions as to how to plug the vagina, except to remind you that you will find the speculum of service in enabling you to introduce a considerable portion of the tow, wool, or whatever material you may employ, much more speedily, and with much less irritation of the vaginal walls than would otherwise be practicable. I am not without hope, however, that a simple apparatus, first employed by two German physicians, MM. Braun and Chiari* may enable us to get rid of the inconveniences inseparable from the use of the ordinary plug. Their contrivance is an india-rubber bottle, to which is attached a metal tube furnished with a stopcock, and also a ring to which straps can be fastened for securing it in its place after it has been introduced into the vagina. It is introduced empty, and may then be distended with cold water to any extent so as to form a most efficient plug, while its withdrawal requires nothing more than to turn the stopcock and let off the water. I have made two alterations in it which I think will increase its usefulness, and which consist in adapting its tube to that of an ordinary Reid's syringe in order that it may be filled more conveniently; and in substituting the soft and yielding vulcanized india-rubber for the hard caoutchouc flask of the original inventors.

The injection of the uterine cavity, though a powerful means of repressing hæmorrhage, has yet in several instances seemed to be a proceeding of much hazard, giving rise to severe inflammatory

* *Klinik der Geburtshülfe*, 8vo. Erlangen, 1852, 1ste Lieferung, p. 125.

symptoms. Its use should therefore, I conceive, be limited to cases (and these are by no means of frequent occurrence), in which, though hæmorrhage may for the moment be restrained by means of the plug, it yet returns so soon as that is withdrawn, while remedies fail to exercise any influence on its flow.

Such a case was that of a woman aged fifty-one, who was admitted into the Middlesex Hospital under my care on September 21st, 1848. Her health had been good till about a year before, when her menstruation became irregular and overfrequent, and in the previous April she had an attack of hæmorrhage, for which she was treated with advantage in University College Hospital, though bleeding returned soon after her discharge from that institution, and had ever since recurred frequently.

On her admission, her appearance was extremely anæmic, her pulse small, and her voice almost inaudible. She complained of constant pain in the lumbar and right iliac regions, increased after each attack of flooding; but a vaginal examination discovered nothing wrong about the uterus, except that it was somewhat larger and heavier than natural. The whole class of astringent remedies and astringent injections was employed with varying result till November 16th; the bleeding sometimes ceasing for a day or two, and then again returning. On that day, however, the discharge was so profuse that it was considered necessary to introduce the plug. This means arrested it; but at 11 A.M. on November 17th, the plug having been removed for six hours, hæmorrhage again returned, and greatly exhausted the patient. After being reintroduced and allowed to remain for twelve hours, the plug was again withdrawn, and no return of hæmorrhage took place; the infusion of matico, which the patient began to take about this time, appearing to restrain the bleeding very effectually. During the remainder of November, and the first few days of December, improvement continued, but the patient now again experienced frequent returns of hæmorrhage, either in the form of a draining away of a pale sanguineous fluid, or in that of frequent sudden gushes of profuse bleeding. Previous to any pro-

fuse gush, she complained of pain in one or other iliac region, most frequently the right. Remedies seemed to have completely lost all influence, and on December 18th, though the hæmorrhage was not at that moment very profuse, yet the patient was reduced by it to a state of extreme exhaustion, her pulse was scarcely perceptible, her voice a mere whisper, and her stomach rejected everything. The os uteri was open wide enough to admit the finger as far as the first joint, but its tissue seemed quite healthy, and under the speculum the appearance of the os was perfectly natural. About three drachms of a solution of a scruple of gallic acid in an ounce of water were now thrown into the uterine cavity, and no considerable pain was excited by the injection. At the same time pure brandy was given to rally the patient's powers, and as soon as her stomach could bear it, the infusion of ergot of rye was administered every few hours. It is needless to detail the daily treatment adopted from this period, for convalescence, as might be anticipated, was tardy. From the time of the injection of the uterus, however, the hæmorrhage completely ceased, its place being taken by a puriform discharge just tinged with blood, and no hæmorrhage reappeared until the 26th of January, when it was neither excessive in quantity nor of long duration. At intervals of rather less than a month hæmorrhage recurred, though it was always readily controlled by treatment, and on April 10th she was discharged from the hospital, well, though still rather weak; her life having to all appearance been saved when in most imminent peril, by the injection into the uterine cavity.

I have no experience of the employment of turpentine as an injection into the uterine cavity in cases of uncontrollable hæmorrhage. I should fear to employ such an agent, which, indeed, has been followed,* when thus used, by violent inflammation of the womb. The infusion of matico, a solution of gallic acid, or a mixture of equal parts of the muriated tincture of iron and water, would appear to me to be safer remedies.

* See a case related in Ashwell's *Treatise on Diseases of Women*, 8vo, 1843, p. 155.

A small glass syringe, not carrying above half an ounce, fitted to an elastic catheter, open at the end, is the best apparatus to employ for injecting the uterus. No advantage would be likely to result from throwing a large quantity of fluid into the uterus, while the danger of its escape through the Fallopian tubes into the abdominal cavity, and of its thus exciting peritoneal inflammation, has been shown by the experience of many practitioners to be by no means imaginary.

LECTURE V.

MENSTRUATION, AND ITS DISORDERS.

DYSMENORRHOEA—its three varieties—neuralgic, congestive, mechanical. Symptoms of neuralgic form; of congestive form, sometimes attended with expulsion of a membrane. Relation of congestive dysmenorrhœa to rheumatic, or gouty diathesis. Mechanical dysmenorrhœa, from contraction of cervix uteri, a rare occurrence.

Treatment of the neuralgic form; various sedatives, and their comparative results—of the congestive form; depletion, and how to apply leeches—treatment of the rheumatic variety—of the mechanical form; cautions with reference to its treatment.

I FEAR you may think that I am uttering a very superfluous truism when I remind you that almost every function of the body if ill performed, is performed with an unusual amount of pain. The feeble stomach is pained by the presence of the food which it is unable to digest; the eye whose vision is imperfect, is pained by the effort to decipher even the most legible characters; and the head of the convalescent aches on the first attempt to resume his ordinary mental occupations.

Just so, the menstrual function when deviating from its most exact performance, either in excess or in defect, is almost always attended by suffering far exceeding that discomfort by which, in the case of healthy women, it is usually accompanied. Amenorrhœa and menorrhagia are both almost invariably associated with suffering, and in the case of the most various disorders of the sexual organs, an undue amount of pain at each menstrual period is a symptom scarcely ever absent. But, besides these instances in which the pain is but one among many ills for which the patient seeks our aid (and probably even in her estimate by no means the gravest), there are other cases where the suffering

of menstruation is so intense in its severity, or so importunate from its continuance, as to constitute a distinct affection, and to claim a place in our nosologies as *dysmenorrhœa*.

It has been customary to recognise three different varieties of this dysmenorrhœa, or painful menstruation ; and the distinction of neuralgic, congestive, and mechanical dysmenorrhœa, terms which interpret themselves, seems to me to rest on good grounds, and to merit being generally adopted.

There are some instances in which pain alone, unattended by any other symptom, is the only important respect in which menstruation differs from a healthy state. This *neuralgic dysmenorrhœa* occurs most frequently and in its simplest form in young women whose sexual system has not been developed till a comparatively late period, and who have not begun to menstruate till a year or two after the average date. The pain, in such cases, precedes menstruation for a day or two, generally reaches its greatest intensity in the course of the first thirty-six hours of the catamenial flow, being sometimes so intense that the patient writhes on the floor in agony, and then by degrees subsides, though it does not cease entirely till the period is over. Though severest in the uterine and pelvic regions, the pain is not in general limited to those situations, but is experienced also in the back and loins, is referred to either groin, and shoots down the inside of the thighs. The pain, too, is aggravated at intervals, and becomes paroxysmal, like that of colic or of labour, while the whole abdominal surface is so tender as scarcely to bear the slightest touch. In addition to these pains, all radiating more or less obviously from the sexual organs, there is often much suffering in other parts. Intense head-ache is very frequent, often confined to one side of the head, or presenting the well-known characters of *clavus hystericus* ; or, in other cases, the stomach is disordered, and the patient distressed by constant nausea or frequent vomiting. In many instances, various other hysterical symptoms manifest themselves, often, indeed, with peculiar intensity, and I knew a patient in whom an attack of hysterical mania ushered in on more than one occasion a

menstrual period. This neuralgic dysmenorrhœa, however, is by no means invariably associated with a hysterical temperament, and patients who suffer most intensely during menstruation, sometimes manifest no symptom of hysteria, but on the contrary, are remarkable for quiet self-possession and well-regulated minds.

In some instances, it seems as if the disorder of the nerves extended to the whole system, while in others it is limited to those which supply the sexual organs, and is then usually of shorter duration on each occasion, though not by any means of necessity slighter in the suffering which attends it than when the sympathies which it awakens are more extensive. Even when pain has altogether subsided after the cessation of a menstrual period, any excitement of the sexual system will, in very many instances, suffice to reproduce suffering. In married women affected with this form of dysmenorrhœa, sexual congress is almost invariably extremely painful, while pregnancy is attended by more than the ordinary degree of local discomfort, and the pain of parturition amounts to intolerable anguish.

I have referred to this neuralgic dysmenorrhœa as occurring in its simplest form in young women in whom there was a tardy, and perhaps an incomplete development of the sexual system. It is, however, by no means limited to such persons, but sometimes comes on after years of healthy and comparatively painless menstruation. I have known menstruation become painful during convalescence from some serious illness wholly unconnected with the sexual functions, and continue so, long after the patient had in other respects regained her usual health. In other cases, the sudden suppression of the menses by cold, or some other accidental cause, is succeeded by obstinate dysmenorrhœa; and this, although no obvious uterine ailment had followed the accident. At other times, inflammation of the uterus, after delivery or miscarriage, is followed by painful menstruation, which persists long after every trace of inflammation or of its consequences has completely disappeared.

But there is another form of dysmenorrhœa which has been

termed the *congestive*, from the peculiar circumstances that attend it. Unlike the purely neuralgic variety, it is less frequent at the commencement of sexual vigour than as an acquired condition at a later period of life. A sense of weight about the pelvis, and a tendency to hæmorrhoidal affections, generally exist in the interval between the menstrual periods; and these symptoms increase considerably a few days before the discharge comes on. During the first twenty-four or thirty-six hours of each menstruation, the discharge in general is but scanty, and the pain is very severe. At the end of this time, however, sometimes even sooner, the hæmorrhage often becomes abundant; and as the blood flows the pain abates, and then ceases altogether. The congested womb ached till nature bled it; just as the head aches, when the brain is congested, till the cupping-glasses or the leeches have relieved the overloaded cerebral vessels. Sometimes in these cases the menstrual flux at no time becomes abundant, and consequently the relief which nature gives is very partial. When this is so, the womb continues to ache and throb during the whole of the menstrual period, and is left afterwards tender and painful. When this is not the case, however, the end of the menstrual period generally leaves the patient in a state of comparative comfort. For the next week or ten days she continues to enjoy a comparative immunity from suffering; but then the symptoms gradually return, and reach their climax of severity with the commencement of the next menstruation.

In some instances of this form of dysmenorrhœa, not only is the amount of blood lost at a menstrual period insufficient to relieve the congested womb, but it is absolutely as well as relatively scanty. In some of the cases the discharge having continued for a few hours, ceases, and then comes on again; while, though scanty, it is intermixed with small coagula, owing, probably, to the blood having been poured out so slowly as to allow of its coagulating within the uterine cavity; an occurrence prevented during healthy menstruation by its comparatively rapid flow into the vagina, where its fibrine is at once dissolved by the

acid secretion of that canal, and its coagulating property destroyed.

In others of these cases we find intermingled with the menstrual discharge, shreds, or strips, or distinct laminae of membrane, or even a small membranous sac, which is seen on careful examination to form a complete cast of the uterine cavity. This occurrence sometimes takes place only once, but oftener it reappears during a long succession of menstrual periods. The discharge of the membrane is generally associated with very considerable aggravation of the patient's suffering; sometimes with distinct periodical pains, like those of abortion; and when to them profuse hæmorrhage is superadded, an occurrence which is frequent, though not invariable, unfounded suspicions have in some instances been entertained with reference to the chastity of women who have had the misfortune to present this combination of symptoms.

In the ignorance which till lately prevailed with reference to the real structure of the uterine lining membrane, it has been customary to speak of the dysmenorrhœal membrane as the product of inflammation, or of some process akin to it. We know, however, that during menstruation the epithelium of the uterine cavity is thrown off in greater or less abundance; while an examination of the membrane suffices to show that what has occurred in its formation and detachment is merely an exaggeration of the process which to a less degree takes place at every menstrual period. The membrane is smooth on one surface, rough, almost villous on the other, and presents the remains of numerous dilated uterine glands; characters that prove it to be the analogue of that decidua which, under the physiological stimulus of conception, passes through a more complete development to serve important purposes.*

I scarcely need say that it is not a matter of indifference in a

* This opinion as to the identity in character of dysmenorrhœal membrane and decidua is now almost universally entertained both in this country and on the continent. In this country the first to assert this identity were, I believe, Dr. Oldham, in *Med. Gaz.*, April 16, 1846, and Dr. Simpson, in *Edinb. Monthly Journal*, Sept. 1846.

practical point of view, whether or no you entertain correct opinions with reference to the structure of this membrane. To regard it as a layer of plastic lymph similar to that which is poured out in croup, at once suggests the employment for its removal of active antiphlogistic measures, such as experience would by no means justify. Reasoning, however, even independent of the actual observation to which I have appealed, would suffice to show the fallacy of this opinion. It is utterly inconceivable that a mucous membrane so inflamed as to become the seat of deposits of lymph should in a few days return to a perfectly healthy condition, and yet periodically undergo the same intense inflammation, issuing in the same deposit: and this with no serious injury to its functions and no permanent change of its structure.

Allied to this congestive dysmenorrhœa, are cases of painful menstruation dependent on constitutional causes, especially on the gouty or rheumatic diathesis; though I cannot pretend to say why in women this peculiar ailment should result from it so much more frequently than the ordinary forms of those disorders with which we are familiar in the male sex. Such cases, however, are by no means rare in any class of society; and wherever they occur, they are chronic in their course and difficult of cure.* A casual attack of cold is in some instances referred to as the occasion of the patient's illness, while in other cases the ailment comes on by degrees, and with no definite exciting cause. Menstruation begins to be more painful than was its wont, often more scanty; an unusual degree of constitutional disturbance attends each period; the pulse at those times is very frequent, the skin hot though perspiring, and lithates abound in the urine. In the intervals, profuse leucorrhœal discharges take place; the pain, though less intense, is yet severe, and is aggravated by trifling causes, or without any obvious reason. The pain at one

* The observations of Dr. Todd on the subject in section ix. of *Practical Remarks on Gout, Rheumatism, Fever, &c.*, 8vo, London, 1843; and those of Dr. Rigby, in his work on *Dysmenorrhœa*, published in 1844, have more especially called attention to this subject.

time is most severe in the back, at another is referred to one or other iliac region, shooting down the legs in the course of the crural nerve, or, like sciatica, affecting the back of the thighs; while occasionally, in addition to these abiding discomforts, the patient is kept in bed for a day or two at a time by slight feverish attacks, accompanied by wandering pains in the limbs, though seldom attended by inflammation and swelling of any of the joints.

The seat of the pain in these cases is no doubt the muscular tissue of the uterus; and the suffering from this cause sometimes outlasts that time of life during which menstruation takes place, though the cessation of the periodical congestion of the womb, which occurs so long as the sexual system retains its activity, is followed by a great diminution of the patient's ills. In the worst cases of this disorder, the womb, though presenting no appreciable alteration, is so intensely tender, that the slightest movement causes intolerable pain; and many instances of an affection which the late Dr. Gooch* described with all that graphic skill of which he was so great a master, and for which he proposed the name of the *Irritable Uterus*, may be referred to this category. I shall presently have a few remarks to make on the treatment of this ailment; just now, I will add only that relief for it is to be sought by measures directed to the constitutional cause, and not by any form of local medication.

Such then are the two principal forms of dysmenorrhœa; the one the neuralgic, the other the congestive; while often we meet with cases presenting the mingled characteristics of both varieties. But there are, besides, instances in which the dysmenorrhœa is the effect of some organic malady of the uterus, such as fibrous tumour, or of some alteration in its position, such as anteflexion or retroflexion, or of some positive mechanical obstacle to the escape of the menstrual fluid, such as narrowing of the cervix, or mouth of the womb. The continuance of dysmenorrhœa for several months in spite of treatment calculated

* *On the More Important Diseases of Women*, 8vo, 2nd ed., London, 1831, p. 332.

to remove it, calls for a careful vaginal examination, in order to ascertain whether the painful menstruation is not merely a symptom of some local ailment which it may be in our power to palliate, if not to remove.

One form of dysmenorrhœa from a local cause, has of late years excited much attention—namely, that in which the suffering is due to the narrow channel through which the blood has to flow. This *mechanical* form of dysmenorrhœa is said to be characterized not only by the pain, but also by the slow escape and scanty amount of the blood discharged, which, also, for the most part, escapes in small, imperfectly formed coagula. The late Dr. Mackintosh, of Edinburgh,* was, I believe, the first person who, in the year 1823, directed his attention to this source of difficult menstruation, and who, in 1826, advised the mechanical dilatation of the os uteri by bougies, for its relief. The impediment may exist either at the external os uteri, or at some limited part of the cervix, especially at the internal os, where the body and neck of the womb communicate, or it may involve the whole of its canal. It appears, in some instances, to be attributable to inflammation, and probable ulceration of the cervical canal, as in the case of a woman once under my care, the canal of whose cervix was at one point so nearly obliterated, as not to allow the passage of the finest cat-gut bougie, and who referred her sufferings to the effects of a labour twelve years before. In other instances, the dysmenorrhœa is habitual, and the narrow cervix is a congenital condition, or one due at least to some defect of uterine development, and this latter I believe to be the more frequent form of the affection.

An impression has of late years been gaining ground that this form of dysmenorrhœa is very common, and mechanical means of treating it have accordingly come very much into vogue; to the neglect, it is to be feared, in many instances, of those internal remedies, by which painful menstruation is in general much more appropriately treated. One circumstance, which I believe to

* In his *Practice of Physic*, 4th ed., 8vo, London, 1836, vol. ii. pp. 431—436.

have much contributed to the support of this opinion, is the fact, that on introducing the uterine sound an obstacle is very often encountered at the internal os uteri to the passage of the instrument into the cavity of the womb. That this obstacle, however, is in reality perfectly natural, can be readily ascertained on the dead subject, since even after the removal of the uterus from the body, a bougie which passes with ease along the cervical canal will then encounter a resistance such as can often be overcome only by considerable effort, or, perhaps, not at all, though a smaller bougie will pass at once with perfect facility, and the uterus, when laid open, will be found to be perfectly healthy. The constriction in this situation which is found to be so considerable even after death, was doubtless in these and many other instances far more considerable during life, and yet in spite of it, the history of such persons often gives no account of difficult or painful menstruation.* Nor, indeed, need this surprise us, for the discharge takes place during menstruation, not in a continuous stream as the urine flows from the bladder, but oozes from the interior of the womb, the blood escaping drop by drop from the os uteri. If the aperture be so small as scarcely to allow this to take place, menstruation no doubt may be rendered very painful; and just as when stricture of the urethra exists, the bladder, and ureters, and kidneys become irritated, and disturbed in the performance of their functions, so it is quite conceivable that a similar state of the cervix uteri may exert the same influence on the function of that organ, and render the menstrual flux scanty in quantity and morbid in character, as the consequence of the difficulty in its discharge. A slight amount of unbiassed observation, however, will teach you that such a contraction of the os or cervix uteri as to impede the discharge of the menses *guttatim* is very unusual; while it will further show that in the majority of cases in which this condition really exists, the narrow cervix is only a part of the evil, that the

* The fact of the natural constriction of the uterine canal at the situation of the internal os, was very clearly asserted by Dr. Henry Beunnett in his work on *Inflammation of the Uterus*. See page 12 of the third edition.

neck of the womb is small because the organ is altogether very undeveloped.

And this brings me to notice the *treatment* of dysmenorrhœa, which must vary just as its forms are various. In the dysmenorrhœa of young girls in whom menstruation is not yet completely established, our efforts must chiefly be directed to bringing about the regular performance of the function as speedily as possible, and there is reason to hope, that in proportion as this is effected, the pain will by degrees diminish. If, however, the suffering be so severe as to require the employment of remedies specially directed to its mitigation, they will in the majority of instances be such as are applicable for the relief of nervous dysmenorrhœa. One of the most serviceable of these is the hot hip-bath, which may be had recourse to on the first threatening of pain, and even twenty-four or thirty-six hours before the date at which the commencement of the menstrual discharge is expected. To obtain the full benefit from it the patient should remain in it for half or three-quarters of an hour; the temperature of the water being maintained during the whole time at 96° or 98° ; while the bath may often be advantageously rendered more stimulating by the addition of mustard to the water. If pain again returns with severity, the bath may be repeated twice or three times in the twenty-four hours, while after its employment the patient should always retire to bed, and remain there until, with the establishment of the menstrual flux, the pain has in great measure subsided. It will, however, still be wise for the patient to remain during the whole period in her apartment, and to avoid all exertion, as well as all changes of temperature.

If the pain be very severe, some sedative or narcotic will probably be indispensably necessary, and this will be likely to produce the best effect if taken immediately on the patient coming out of her bath. Opium, in some of its various preparations, is of course the most powerful remedy; but there are many reasons why it is undesirable to have recourse to it, unless the milder sedatives have been tried and found inefficacious. In many

instances opium deranges the digestive functions seriously, and inflicts on the patient a very distressing headache for hours after its first soothing influence has passed off; but a still more serious objection to its use is furnished by the fact that young women not seldom become habituated to the drug from having had recourse to it as a sort of domestic remedy for deadening the pain of menstruation. In many instances of the purely neuralgic dysmenorrhœa, ether alone suffices to remove the pain, or at least greatly to mitigate it, and when this is so, its transitory influence and the circumstance that it in no way interferes with the digestive functions, render it far preferable to any of the more direct narcotics. A draught containing half a drachm of the compound spirits of ether, and fifteen minims of chloric ether, will generally answer the purpose very well, while in cases where the patient, as sometimes happens, has an insuperable objection to the taste of ether, the eau de luce, or tinctura ammoniæ composita of the pharmacopœia, forms a very good substitute for it.* A single dose of any of these remedies will often suffice, but if not, they may be repeated frequently, and at short intervals. Some years ago, the Sumbul, an Indian remedy, was introduced into practice as applicable to the relief of neuralgic pains, as well as of other ailments. It certainly seems to possess a measure of that compound stimulant and anodyne property which characterizes ether, though in a far inferior degree. You will, however, always find it useful in the management of the diseases of women to have numerous expedients at hand for the relief of minor ailments, in addition to being well acquainted with the great remedies for more serious ills.

Should none of the above-named simpler means suffice, henbane is that one of the more decided narcotics of which you may

* (No. 8.)

R	Tinct. Ammoniæ compositæ .	℥vi
	Tinct. Aurantii	℥j
	Syrupi Simplicis	℥j
	Inf. Aurantii co.	℥iv
	Mist. Camphoræ	℥vi—M. ft. Haustus.

make a trial with the least risk of its disagreeing with the patient. Forty minims of the tincture, or five grains of the extract, are an average dose, and the quieting action of the remedy seems to be much increased, especially in the case of uterine pain, by combining it with camphor, five grains of which may be given with each dose of the henbane. Another remedy extremely serviceable in controlling neuralgic pain, and free from many of the inconveniences of opium, is the Indian hemp, or *Cannabis Indica*. There are two drawbacks, however, from its use. The one is, that owing to the absence of any official preparation of the drug, the medicine, as ordered from different druggists, varies much in strength; the other is that the susceptibility of different persons to its influence varies much more than in the case of opium. For these reasons, it is expedient that it should always be procured at the same place, and also that it should always be ordered in a minimum dose at first, until you have ascertained its effect on your patient. The inhalation of chloroform or ether, though its effects are but transitory, yet sometimes exerts a permanent influence in mitigating uterine pain. The remedy, however, is too hazardous to be entrusted to the patient or her friends, but the local application of chloroform to the hypogastric or pubic region is not only free from risk, but is also often serviceable. If none of these means give relief, opium becomes our last resource, and Dover's powder, morphia, the sedative solution of opium, and the black drop, are all of them, in these cases, to be preferred to the simple tincture, because they generally occasion less sickness or headache, and are less apt to produce constipation of the bowels. Sometimes medicines given by the mouth seem unavailing, or the severity of the pain induces us to seek for a remedy that shall be more rapid in its action, and in these circumstances an opiate suppository, or an opiate enema, the bulk of which must of course be very small, will often afford speedy relief.

I do not think it will be out of place if I here very strongly advise you to look on every case of dysmenorrhœa in young women as of importance, and not to content yourself with giving

a few general directions, or with writing a prescription for your patient, if the pain from which she suffers should chance to be very urgent. There is always much greater risk of the attacks becoming habitual, and thus rendering your patient's future life miserable, than there is reason for expecting the popular belief to be realized, and that the ailment of the girl will spontaneously cease when she attains to full womanhood. Every precaution which I have suggested is of the greatest moment; the confinement of the patient to her room, the absolute rest, the repose in bed during the early part of the menstrual period, are indispensable with each return of menstruation, so long as the tendency to dysmenorrhœa continues, and I believe are much more important, as far as eventual permanent recovery is concerned, than is the employment of remedies to relieve pain on any single occasion. Your care, moreover, must not cease with the cessation of the attack, but your attention must be most watchful during the menstrual intervals, to correct anything wrong in the general health, and to invigorate the patient's system, which in these cases is almost always feeble. One other caution you must allow me to add: there is a popular impression that when the highest functions of the sexual system are brought into play, many ailments, previously troublesome, are likely to cease, and it is beyond a doubt that, in some instances, marriage, and pregnancy, and child-bearing are followed by these desirable results. I fear, however, that the chances are the other way; that the girl who suffers from dysmenorrhœa will be likely to suffer more from it after marriage than she did before; that the extreme sensitiveness of her uterine organs will render marriage, in all sexual respects, a very painful condition; that conception will be less likely to occur than in another woman, and that if it should, pregnancy and labour will be attended by far more than the usual amount of distress. If this be so, however, you must see how cogent the reasons are for treating dysmenorrhœa more gravely than may at first sight appear necessary. Good taste and good feeling will not fail to guide you in selecting the best way of conveying your opinions to your patient and her

friends, and you will most likely find a ready acquiescence in your directions so soon as the grounds on which they rest are clearly understood.

In the *congestive* form of dysmenorrhœa, anodynes no longer furnish the ready resource for the relief of present suffering which they supply in the neuralgic variety of the affection. The uterus and the pelvic viscera generally are overloaded with blood, and it is only by its abstraction that we can relieve the patient. Cupping to the sacrum, or the application of leeches to the hypogastrium, the anus, or the uterus itself, are the means by which this end is to be accomplished. It is not in general, however, that the abstraction of so large a quantity of blood as seems implied in the application of the cupping-glasses is necessary or desirable. The great benefit of leeching the hypogastric or iliac regions seems to be confined to those cases in which the pain, referred especially to the sides of the pelvis, indicates the ovaries to be its seat; but in other cases it is decidedly inferior in efficacy to the application of leeches to the anus. These modes of abstracting blood can be resorted to at any time, even just before menstruation or during the presence of the discharge; leeches cannot, however, be applied to the uterus itself within three or four days of an expected menstruation without considerable risk of disturbing the regularity of its return.

When depletion has been resorted to, the tepid hip-bath will generally afford some relief, while afterwards the patient should remain in bed, and take some diaphoretic saline, such as the liquor ammoniæ acetatis, combined with small doses of henbane or of opium, the efficacy of which remedy will in these cases be much increased by combining it with nauseating doses of tartar emetic. In some cases of this description the direct narcotics in any form or combination are ill borne, exciting much constitutional disturbance, and relieving the pain but little or not at all. Ipecacuanha in grain or half-grain doses, every hour till a decided nauseating effect is produced, is in these circumstances sometimes of very great service, affording much relief to the pain, and also lessening the amount of discharge, which other-

wise not infrequently becomes over-profuse about the second or third day of menstruation.

The treatment of the patients at the menstrual period comprises, however, only a small part of what is needed to bring about their cure. Though relieved for a season by the flow of blood, as is generally the case, the symptoms by degrees return before the next period comes on. It is during this interval that so much is gained by local depletion of the uterus ; a proceeding which, although abundantly simple, I may, perhaps, as well stop for a moment to describe to you.

Leeches, when applied to the womb, generally produce a much greater flow of blood than follows their application to any external part ; and four, or at the most six, are therefore as many as it is desirable to put on at one time. Metallic tubes, perforated with holes at one end, and capable of being closed by a plug at the other, and some other similar contrivances, are sold in instrument makers' shops, and are very useful for servants or nurses, whenever they are entrusted with the operation of leeching the womb. I prefer, however, to employ a speculum, and generally use one of Fergusson's reflecting glass speculums, by which you can both ascertain more exactly the part to which to apply the leeches, and also, if the os uteri be at all open, have the opportunity of inserting into it a little bit of cotton wool, in order to prevent the leeches biting within the canal of the cervix ; since that accident always gives most acute pain, though otherwise the operation is attended by very little suffering. The speculum, being introduced and adjusted as the patient lies upon her left side, the leeches are put into it, and then pushed up to the uterus by means of a little cotton wool or lint, which may be withdrawn in five or ten minutes, the leeches having generally bitten by that time. Now and then a leech, crawling out of the speculum, will make its way down between the instrument and the vaginal wall, and, fixing on the external parts, will cause much pain ; but a little care will enable you to guard against any such mischance. I would not have taken up your time with details which may seem so trivial, if it were not that in the

country you may be unable to command the services of a class of women who in London get a very good living by leeching the uterus under medical direction. After the leeches have come away, a warm hip-bath is generally a comfort to the patient; and, unless the bleeding has been very profuse, is desirable as a means of promoting it, on the same principle as we often put on a poultice after the application of leeches externally. The evening is generally the best season for applying leeches to the womb, in order that the rest and sleep of the coming night may relieve the patient, jaded and wearied by the discomfort of the operation.

I may just add, that it has been advised, as a more expeditious and less irksome mode of depleting the uterus, to scarify its lips through a speculum by means of a sharp lancet affixed to a long handle. Such scarifications are by no means painful, and in some instances where the mucous membrane covering the lips of the uterus is the seat of undue vascularity, and presents a peculiar granular, abraded appearance, I have seen much benefit result from it, just in the same manner as scarification of the palpebral conjunctiva sometimes does much good in strumous and other forms of ophthalmia. We cannot, however, abstract by this means any considerable amount of blood, and whenever there is much congestion of the vessels of the uterine substance, which we are anxious to relieve by depletion, leeches to the part are always to be preferred.

Depletion, attention to the bowels, a nutritious but unstimulating diet, and all those little precautions which come under the somewhat vague denomination of attention to the general health, must in all of these cases engage our care during the intervals between each menstrual period. When to this I add, that the back-ache, if not relieved by a plaster, generally yields to a croton oil liniment sufficiently weak not to produce a troublesome pustular eruption, and that small blisters in one or other iliac region usually mitigate the pain referred to the situation of the ovaries, I think I have given you all the special directions which are applicable to cases of this description.

I have, however, referred to some instances in which the painful menstruation is associated with various evidences of a rheumatic or gouty diathesis, and such cases are both peculiarly painful, and peculiarly intractable. Colchicum is often of much utility, and during the paroxysm twenty or thirty minims of the tincture in combination with small doses of laudanum and of antimonial wine, will often give more relief than any other remedies, and prove especially useful when large doses of narcotics would be of no service. The treatment during the menstrual intervals is of particular importance to this class of patients, and yet so various are the symptoms in different cases, that it is impossible to lay down any definite plan as applicable to all. So long as the bowels are very constipated, as the tongue is foul, and the urine loaded with lithates, colchicum may be given two or three times a day, combined with the sulphate and carbonate of magnesia, with a small dose of blue pill or grey powder with the extract of poppy or of henbane at night. When the constipated state of the bowels has been overcome, the acetous extract of colchicum may still be continued at night, while during the day some mild tonic is given, such as the nitromuriatic acid with extract of taraxacum, or the liquor cinchonæ and taraxacum ; for with the disposition to local plethora and congestion there is almost always associated a general want of power in the system. While the tonic plan is generally pursued, any increase of pain, or irritability of the bladder, or an increased deposit of lithates in the urine, would call for a return to the use of the colchicum, and its employment with greater frequency. The persistence of the symptoms and the presence of a profuse leucorrhœal discharge, as well as of an habitual excess of lithates, indicates the employment of the iodide of potassium, which is often of great service when the colchicum has already disappointed our expectations. The dysuria in these cases is frequently much relieved by the patient drinking Vichy water instead of spring water ; while the form of tonic that in general suits best is the citrate of iron in doses not exceeding five grains twice a day, for which the Vichy water, sweetened with a little syrup of orange-peel, is a very

agreeable vehicle. Lastly, when this condition has existed for years, it becomes, I fear, almost incurable. The waters of Carlsbad and of Wiesbaden do, indeed, effect something towards the alleviation of the patients' sufferings, sometimes, perhaps, even bring about a cure, but at the best slowly, uncertainly, and leaving behind a great disposition to relapse. Hence the wealthy lose heart at what seems to be a never-ending treatment, requiring to be renewed year after year, and imposing as the price of even moderate success, strict self-denial, and precautions which almost exclude from society those who observe them. The poor, unable to afford the luxury of illness, are at least as unfortunate, and endure a life of wearing pain, all the more intolerable, perhaps, from its depending on no dangerous disease, and tending but little to shorten an existence which it yet renders extremely miserable.

With reference to the *last* form of dysmenorrhœa—namely, that dependent on the narrowness of the os and cervix uteri, and the consequent mechanical impediment to the escape of the menstrual fluid, I have already expressed my conviction of its rare occurrence. In some instances in which this was supposed to be the cause of painful menstruation, the result of careful examination has been to show that the cervix was small, and its canal narrow, just because the sexual organs generally were undeveloped. Such cases, I need not say, are not cases of mechanical dysmenorrhœa, nor to be relieved by any attempt at dilating the cervix. Neither, indeed, is the proceeding to be resorted to, on speculation, if I may say so, and with no better warrant than the fact that the dysmenorrhœa is habitual or of long standing, and that other means have not been successful in effecting its cure.

To judge, indeed, by the multiplicity of contrivances which of late years have been employed for the purpose of dilating the cervix uteri, you would be led to a different conclusion from that which I believe to be the right one; and would suppose that the existence of a narrow cervix uteri was of great frequency. In addition to ordinary bougies such as were employed by

Dr. Mackintosh, and to bougies of flexible metal which have been found in some respects more convenient, metallic stems with bulbous ends have been introduced, and left in the cervical canal for an hour or two at a time ; and these stems have been recently modified by constructing them of two different metals with the view of obtaining some kind of galvanic action in the interior of the uterus. These ingenious contrivances are the inventions of Professor Simpson of Edinburgh. I apprehend, however, that as in the case of the galvanic rings, which some time ago were sold about the streets for the cure of neuralgic and rheumatic affections, so in the case of the stems, the amount of galvanic action set up must be too slight to exert any real influence ; while independent of the difficulty which there always is, especially if the vagina be narrow, in their introduction, the effect of allowing metallic bougies to remain for any considerable time in contact with the interior of the uterus, has almost always appeared to me to be that of producing very considerable suffering.

Besides the gradual dilatation of the os and cervix uteri by bougies, instruments not unlike the *speculum matricis* of the ancients have been devised for forcibly widening it, literally screwing it open, and others for incising it by means of a *bistouri caché*. I am perfectly at a loss as to the principle upon which these instruments are recommended. If the cervix uteri be wide enough to admit them, I do not see how its narrowness can offer a mechanical impediment to the escape of the menses. I can, however, readily understand that the uterus may suffer severely from the violence offered to it, and indeed have known pelvic abscesses succeed to some of these manipulations.

These proceedings are, I believe, much less frequently resorted to now, since the mischief to which they are likely to lead has become more evident, than they were a few years ago. I cannot, however, refrain, now that the opportunity presents itself, from warning you against plausible errors such as led to this practice ; errors into which you are all the more likely to fall, from their

being of a kind to receive speedy currency among our patients. Non-professional persons cannot understand the reasons which induce us to adopt one course of medical treatment instead of another ; but they can quite understand the popularized pathology which tells them that they menstruate with pain because the passage of the womb is too narrow, and in the hope of a cure will submit with readiness to almost any amount of mechanical treatment ; and will perhaps draw comparisons between the doctor who is resorting to very needless interference and the less officious person who did no more than the necessities of the case required ; comparisons, I scarcely need say, very unfavourable to the latter.

If now, after taking all possible care to avoid mistakes, you still come to the conclusion that the painful menstruation is, in part, if not altogether, due to the narrow cervical canal, I think you will find a set of flexible metallic bougies the best and most convenient means for dilating the passage. Those which I use correspond in size with the sounds employed by surgeons for examining the bladder ; but I have had a notch made at two-and-a-half inches from the extremity, in order to be able to tell how far the instrument has been introduced. Five or ten minutes are, I think, as long a time as it is desirable to allow the bougies to remain ; but they should be introduced daily, and their employment should not be discontinued until the canal admits one corresponding to the ordinary No. 9 bougie. If after frequent attempts the bougie can be introduced only a short distance, a prepared sponge tent, such as Professor Simpson was the first to bring into use, should be introduced, and then a larger, and still larger, till in the course of a couple of days the cervix will be widely dilated throughout ; or else we shall find the point at which a decided impassable contraction exists. In the only case in which I discovered this state of things, the patient's sufferings dated from a severe confinement, and the stricture close to the internal os uteri would not allow the passage of the smallest catgut bougie. In this instance I employed Stafford's

instrument for dividing impermeable urethral stricture ; and the result of this proceeding, and of the subsequent introduction at first of sponge tents, and afterwards of metallic bougies to keep the passage pervious, was in the highest degree satisfactory.

In no other case, however, has the employment of a cutting instrument for widening a narrow cervix uteri appeared to me either necessary or proper.

LECTURE VI.

DISEASES OF THE UTERUS.

Immediate results of pregnancy and delivery not treated of, though their remote effects are numerous and important.

Inflammation, and kindred processes.

HYPERTROPHY OF THE UTERUS from deficient involution after delivery, or abortion ; —from uterine irritation. Illustrative cases, and treatment. Partial hypertrophy, affecting the cervix ; its effects. Treatment, removal of enlarged cervix, dangers of hæmorrhage.

INFLAMMATION. ACUTE INFLAMMATION ; its rarity, its causes, symptoms, and results. Treatment.

A COURSE of lectures on the diseases of women, in which it is not proposed to include the ailments either of the pregnant or of the puerperal state, must needs present much that is defective in arrangement and incomplete in execution. These defects, however, appear to me to be a smaller evil than would be the occupying much of your time with the reconsideration of subjects such as puerperal fever, or phlegmasia dolens, which have already come before your notice in the lectures on midwifery, and which besides have engaged, and to such good purpose, the attention of many writers both in this country and on the continent.

Sacrificing, therefore, accuracy of nosological arrangement to practical convenience, I shall leave unnoticed alike the special diseases of pregnancy, and the morbid conditions which follow immediately on delivery. We shall find, however, over and over again, that conception, pregnancy, and delivery, are among the most frequent exciting causes of disorder of the sexual functions, and of diseases of the sexual organs, and also that many ailments which come under our care, days, or weeks, or even months afterwards, admit of being traced back uninterruptedly to their

commencement in a miscarriage, or a severe confinement, or in some interruption to the changes that should occur in the puerperal state. This is especially the case with all the diseases which are the result of inflammation, or of kindred processes, such as pelvic abscesses, hypertrophy of the uterus, induration of its cervix, or ulceration of its orifice, with all the varied forms of menstrual disorder and of leucorrhœal discharge which attend upon them.

The active forms of inflammation of the sexual organs, which threaten life soon after delivery, are not, however, those whose sequelæ most frequently present themselves to our notice in hospital practice, or call for our attention in private. In many of these the local mischief is but a part of the disease, one of the consequences of that altered condition of the blood in which the essence of puerperal fever consists, and contributes only in a secondary degree to imperil or destroy the patient's life. In such cases, if the patient survive the constitutional malady, the local mischief is slowly but surely repaired during the course of her tedious convalescence, and the sexual organs, restored to their integrity, resume in time the healthy performance of their functions. In other instances, where the affection has been from the commencement purely local, the severity of the attack and the intensity of the suffering usually lead to corresponding activity and decision in the treatment, while the sense of past danger inspires in the patient and her friends the observance of most minute precautions until her health is completely re-established. Hence it results that the great majority of cases of inflammation and enlargement of the womb, of inflammation of the uterine appendages, or of suppuration in the pelvic cellular tissue, which date back to pregnancy, miscarriage, or delivery, weeks or months before, are not only chronic in their course, but were attended from the very outset by symptoms of comparatively slight severity, and manifested themselves by a state of ailing rather than of serious illness; or succeeded to a sort of imperfect convalescence, for the incompleteness of whose character no adequate cause appeared for some time assignable.

One result of inflammation succeeding to miscarriage or delivery is to *check that process of involution by which the womb ought to be restored* in a few weeks to the size and condition which it presented before pregnancy began. If you examine the body of a woman who died of uterine inflammation after delivery, one of the first things to arrest your attention will be the large size of the womb, which, after the lapse of four or five days, will be found to be as large as the healthy womb when only twenty-four or thirty-six hours have passed since the completion of labour. This increased size of the uterus, too, is not due simply to its natural contractions being arrested, nor to the unusual afflux of blood towards it, nor to the effusion of the products of inflammation into its substance, though possibly all of these causes may in various degrees contribute to it; but is in a great measure owing to the mere suppression of those changes which ought to occur after delivery, and with whose nature the microscope has made us in some measure acquainted. In a perfectly healthy condition, a large amount of the blood previously supplied to the uterus is at once cut off by the powerful contractions which either completely close the vessels distributed through its substance, or at any rate greatly diminish their calibre. Its tissue having performed the function for which it was raised during pregnancy to so high a degree of development, undergoes, as other tissues do previous to removal, a process of degradation or fatty degeneration; and having thus become more readily susceptible of removal, is either absorbed, or is discharged with the lochia from the interior of the womb. For some three or four weeks, little else goes on besides this process of degradation and removal, and this is much more active during the second week* after delivery, than either before or after that period. There next, however, begins a process of reconstruction of the organ; and nuclei, and caudate cells, and elements of new fibres are formed, which await only the stimulus of a fresh conception to attain the same perfection of structure as was

* According to Heschl, *Wiener Zeitschrift*, and Schmidt, *Jahrbücher*, vol. lxxvii. 1853, p. 341.

manifest in the former uterus. Observers are not altogether agreed as to how soon this reparative action begins; whether it is quite secondary to the removal of the elements of the old uterus, or whether, as seems indeed most likely, removal of the old and construction of the new go on actively at the same time. The interior of the uterus undergoes changes as considerable as those which take place in its substance; and it is not until its lining membrane, with the exception of that of the cervix, has been several times reproduced and then cast off in a state of fatty degeneration, that it resumes the same condition as before impregnation.*

The occurrence of inflammation appears to interrupt these processes, for though fatty degeneration of the tissues takes place, yet the removal of the useless material is but imperfectly accomplished, while the elements of the new uterus are themselves, as soon as produced, subjected to the same alteration, and the organ remains, long after all active mischief has passed away, increased in size, and at the same time composed of a tissue inapt for all the physiological processes of conception, pregnancy, and child-bearing. I cannot pretend to tell you the intimate nature of the changes which the uterine substance in these cases may afterwards undergo, for the microscope here leaves us for the present at fault, and many circumstances will always render the investigation of the effects of inflammation, and of its kindred processes when seated in the womb, particularly difficult. It must, however, be at once apparent, that after inflammation has passed away, its effects may remain in the larger size and altered structure of the womb, and that the very nature of these changes will be such as to render the repair of the damaged organ both unlikely to occur, and slow to be accomplished, and must leave it in a condition peculiarly liable to be aggravated during the fluctuations of circulation, and alternations of activity

* The best microscopic observations on this subject are those of the late Franz Kilian in Henle's *Zeitschrift*, vol. viii. p. 53, and vol. ix. p. 1, with which those of Heschl, *loc. cit.*, generally correspond, though there are some differences between their statements in points of detail. Dr. Simpson was, I believe, the first to call attention to the practical bearings of the subject. See his *Contributions to Obstetric Pathology*, vol. i. p. 26.

and repose, to which the female sexual system is liable. It must also be obvious that for these results to be produced, it is by no means necessary that the inflammation be very severe in character, but that a degree of inflammatory action far short of what is requisite to endanger life or to occasion much suffering, may yet interpose a great obstacle to the complete involution of the womb.

The importance of this condition is due less to the symptoms to which it gives rise, so long as it remains uncomplicated, than to the circumstance, that complications of some kind or other are very apt to occur; that the heavy uterus is very likely to become prolapsed, or the enlarged uterus to become the seat of permanent congestion, or to be attacked by chronic inflammation. A sense of weight in the pelvis, more or less bearing down, and a disposition to excessive and over-frequent menstruation, are, however, seldom absent when any considerable uterine enlargement exists, and in general the size of the womb and the severity of the symptoms are in direct proportion to each other.

One of the best marked instances of this *deficient involution* of the uterus which I have met with, occurred in the person of a woman aged thirty-one, who had been married twelve years, and had given birth to five children at the full period, and had also miscarried three times. Her last abortion occurred at the third month, six weeks before her admission into St. Bartholomew's Hospital. Since this abortion she had suffered from shooting pains at the lower part of the back and in the abdomen, from bearing down pain during every effort at defæcation, and from a constant sanguineous discharge by which she had been much exhausted. The medical man under whose care she had been, told her that she had a tumour in the womb. On examination the uterus was found low down, completely retroverted, the os uteri being directed forwards, and only a short distance from the vulva. Almost immediately behind the os, the uterus swelled out into a globular tumour of the size of a small apple, elastic to the touch. The canal of the cervix was open so as to admit the finger with-

out difficulty. On introducing the uterine sound, it passed, with the concavity turned backward, for a distance of five inches and three quarters, and on turning it round, the tumour previously distinguished completely disappeared.

The patient was kept quiet in bed, was allowed a little wine and meat diet, and the hæmorrhage ceased, and the canal of the cervix contracted under the use of the ergot of rye, though no sensible uterine action was excited by the remedy. She afterwards took preparations of iron, and began the employment of the cold douche to the uterus, by which she was already much benefited, though the uterus was not much diminished in size, when the outbreak of small-pox in the ward compelled me to discharge her eighteen days after her admission. I saw her three months afterwards; her health was still much improved, but she complained of profuse menstruation, returning every fortnight, and her womb was still retroverted, though it was much smaller than before. At the end of rather more than three years she again came under my notice, having in the interval miscarried several times at an early period of pregnancy. Her uterus was still retroverted, and the abortions were probably due to the organ having been bound down by adhesions in this unnatural position. It had however greatly diminished in size, and was now little if at all larger than the healthy womb.

Besides this form of uterine enlargement from defective involution, there is another, occasionally, though much less frequently met with, in which the *enlargement of the womb* takes place independent of previous pregnancy, and is *the result of a more genuine hypertrophy*. Cases of this kind, which I have met with exclusively in women who have lived for a longer or shorter time in childless marriage, present themselves in most instances without any definite clue to their history; sense of weight in the pelvis, pain usually of a burning character, and hæmorrhages having gradually come on and forced themselves by their slowly-increasing severity (sometimes not till after the lapse of years) on the patient's notice. Excessive or intemperate sexual intercourse does not produce it, though that leads to its own train of

evils ; but there has in many instances seemed good reason for associating the condition with the imperfect performance of that function, and sometimes the evidences of that being the case have been conclusive.

Some years ago I saw a lady, aged forty-three, who, during thirteen years of married life, had never been pregnant. She had always menstruated painfully, and rather profusely ; and both these ailments had by degrees grown worse, and this especially during the last few months. She complained of sense of weight and dragging immediately on making any attempt to walk, and induced even by remaining long in the sitting posture. The bowels were constipated, and defæcation was difficult. Menstruation was very profuse, accompanied by discharge of coagula, while at uncertain intervals during its continuance most violent paroxysms of uterine pain came on. On examination, the enlarged uterus was distinctly felt above the symphysis pubis as large as the doubled fist, and per vaginam the whole organ was found much enlarged and much heavier than natural ; the cervix large and thick, but not indurated ; the os uteri small and circular ; and the hymen was entire.

Rest, attention to the bowels, local leeching every fortnight, continued for several months, together with the careful employment of preparations of iron combined with small doses of the iodide of potassium, were followed by the gradual suppression of the menorrhagia, by great diminution of all the patient's painful sensations, and by marked lessening of the size of the uterus. I believe, too, that in most cases, a similar plan of treatment, coupled of course with temporary separation from her husband's bed, will be followed by improvement, and if long enough persevered in, by complete recovery of the patient. In the instance I have just related, the patient's age and the number of years that she had already been married put aside all question as to the possibility, or at least the probability, of her becoming pregnant. A somewhat similar state of things is, however, sometimes observed in younger women, and within a few months after marriage ; and the state of the husband's virile powers will be a

point concerning which it will be your duty in these cases to make some inquiry, and perhaps even may find it expedient to offer some suggestion. You must bear in mind that not only the old rake, but also the hard student, or the man who has long led a life of perfect chastity, often has but feeble sexual power. Such a person marries: anxiety for children, or some of those complex feelings which at once come into play in all matters concerning the generative functions, lead him to over-frequent attempts at sexual congress. The act is incompletely performed; nervous apprehension leads to its still more frequent attempt and its more incomplete performance; and, unless by good fortune pregnancy has taken place very soon after marriage, a condition of permanent uterine congestion is induced, which leads to hypertrophy of the organ, and the wife becomes as inapt for conception as the husband is for procreation. But I have said enough concerning a matter which I would gladly have left unnoticed; your own good sense will suggest to you what advice to give, and your good taste will dictate to you how best to give it.

Over and over again, in the course of these Lectures, I shall have to speak of hypertrophy of the uterus as a secondary result of many other ailments of the organ, and as greatly increasing the difficulty of their cure. If fibrous tumours form within its substance, the uterus increases in size; and this in a manner proportionate to the intimacy of the relations between the foreign body and the tissue of the womb. If the organ sinks lower down than natural, the result of the unaccustomed irritation to which it thereby becomes exposed is to produce its enlargement, and thereby to increase the difficulty of cure of the prolapse. In short, whenever the uterus is exposed to unusual irritation, it increases in size; not necessarily, nor I believe generally, as the result of inflammation, but because the organ is composed of formative material, which excitement of any kind will call into active development, though it is only under the stimulus of pregnancy that that development goes on to any useful end, or attains its full perfection.

There still remains *one form of simple uterine hypertrophy* to which I must refer before passing on to other subjects. It is *one in which the enlargement is limited to the neck of the womb*,* and sometimes even involves only one lip, generally the anterior. In the latter case it is usually consequent on child-bearing, and perhaps is, strictly speaking, rather the result of a partial deficiency of involution of the uterus than the effect of a genuine hypertrophy of the part.† When affecting the whole of the cervix, it has, however, not appeared to be traceable to any such cause, since I have met with it in women who though married were sterile, and once even in an unmarried girl. The ailment seems to consist of simple overgrowth of the part, the neck of the womb being in all respects healthy to the touch, and the os uteri free from any trace of disease. The chief increase is in length, the portio vaginalis, instead of being half or three-quarters of an inch long, measuring an inch and a half, or two, or even three inches. In those instances in which the elongation of the cervix is most considerable, the uterus sinks down in the pelvic cavity, so that the os uteri sometimes comes to lie just within the orifice of the vulva, or even projects beyond it, giving rise to many of the symptoms of prolapsus, and being often taken for it by the patient.

The symptoms, as just mentioned, are those of prolapsus, and consist of a sense of weight and bearing down, aggravated by any exertion, and increased also during the increased afflux of blood towards the pelvis at each menstrual period. The condition presents also a mechanical impediment to sexual intercourse, and once or twice discomfort in the act has been the patient's chief reason for applying for relief. I believe the state also to

* Though noticed before by continental writers, Dr. Evory Kennedy was the first in this country to call attention to this affection in a paper published in the *Dublin Medical Journal* for 1838.

† There are two other forms of hypertrophy of the cervix uteri which I shall consider hereafter; one in which the elongation of the neck of the womb is a secondary result of prolapsus of the vagina; the other in which the hypertrophy is limited, or nearly so, to the mucous membrane, and in which the outgrowth assumes the form of a polypus, and has been described under that name. See the Lectures on Prolapsus and on Polypus.

be an occasional cause of sterility, probably from the male organ not coming into contact with the os uteri, and from the consequent difficulty in the access of the fecundating fluid to the womb. For this effect, however, to be produced, the hypertrophy must needs be considerable.

I know no cure for this affection, except the removal of a portion of the superfluous growth. But as the condition is one productive of inconvenience rather than of serious evil, and as the removal of a portion of the cervix uteri is sure to be followed by profuse bleeding, is often, indeed, succeeded by serious hæmorrhage, it is the wiser course to leave the smaller degrees of hypertrophy without interference. Even though the desire of children should prompt your patient to submit to it, I should advise you to be very guarded in the promises you make with reference to this point, for it is quite possible that there may be some deeper seated reason for the woman's sterility, one which no mechanical proceeding can remedy.

If the operation is determined on, the patient lying on her back, and having been brought under the influence of chloroform, the uterus may readily be drawn down with hooks, and a portion of the cervix removed by a pair of curved blunt-pointed scissors. Ice-cold water and the infusion of matico may check the bleeding, but I believe you will almost always find it necessary to plug the vagina. I have seen more than one instance in which the hæmorrhage was extremely formidable, and remember a case that was under Dr. Kennedy's care at the Dublin Lying-in Hospital, in which, after the removal of the anterior lip of the uterus, the bleeding could be checked only by the actual cautery. Do not then think it a superfluous caution if I urge you in these cases, to be extremely careful in plugging the vagina thoroughly, and to watch your patient for some time afterwards, since the hæmorrhage is sometimes very unmanageable, and if the patient be weakly may even prove dangerous.*

* This subject is one which I must again notice when speaking of the amputation of the cervix uteri in cases of malignant disease. At present I will merely refer to some very useful cautions as to this very point by M. Pauly, at p. 473 of his *Maladies de l'Uterus*, &c., 8vo, Paris, 1836.

From the study of simple errors of nutrition, leading to the increased growth of an organ, the transition is easy to the examination of the effects produced on it by inflammation. In the case of the uterus, however, there are many circumstances which render this study peculiarly difficult. Though we regard it as a single organ, it is yet made up of parts differing widely in structure and in function, and having very different tendencies to disease, while these tendencies vary at different times according as the highest functions of the sexual organs have been recently exercised, or have never been called into activity, or as the period for their performance has already passed. Moreover, the evidence of pathological anatomy which corrects so many errors in other departments of medical inquiry, is little available in the case of diseases, which, like the inflammatory affections of the unimpregnated womb, hardly ever lead to a fatal issue; so that we are in constant danger of mistaking pseudo-morbid appearances for serious alterations, or of exaggerating the importance of real changes of structure. Besides, the office of the uterus in the unimpregnated condition is so humble, and its functions are so few, that there must needs be great sameness in the symptoms which attend upon its disorders; and disturbance of menstruation, increase or alteration of the naturally scanty secretion furnished by its mucous membrane, are alike met with in the most diverse affections. Our means of examining the condition of the womb are also very imperfect, compared with those that we possess for investigating the state of other organs; and hence the question often arises, whether the signs of disease which we discover are the cause of the symptoms, or whether they are the index of other and more important changes, or whether they are neither the one nor the other, but mere casual concomitants of graver ailments, concerning whose nature and degree we can from them deduce no conclusion. From these circumstances it has arisen, that the inflammatory diseases of the uterus have been and still are the subject of conflicting opinions, that much of what may seem to me to be true concerning them will be unavoidably at issue with what is taught by others. and that, here-

after, your own experience may lead you to conclusions differing on many points from both.

Before entering on debateable ground, however, I may say a few words concerning *acute inflammation* of the unimpregnated uterus, an ailment universally admitted to be of rare occurrence. I have, however, seen it come on with great severity in the course of gonorrhœa, and believe that not only in this case, but also in the generality of instances, the inflammation begins in the interior of the womb, whence it extends outwards, though it involves the muscular substance of the uterus to a much less degree than its lining membrane. The tendency indeed of inflammation of the uterine mucous membrane to extend along the Fallopian tubes, and to attack the peritoneum, is much stronger than to affect the tissue of the organ, and though abscesses sometimes form as a secondary result of the disease, they are yet almost always situated in the pelvic cellular tissue, or within the folds of the broad ligament, and scarcely ever in the uterine wall itself.

The affection is not only infrequent in its occurrence, but it is still rarer for it to endanger life, and the only instance which I have seen after death of the unimpregnated uterus in a state of acute inflammation, was in the case of a lady who died of peritonitis, for the supervention of which no cause could be assigned during her life-time. On examination, however, her uterus was found to be much enlarged, and a fibrous tumour of the size of a hen's egg was imbedded in its posterior wall. Both the tumour and the thickened uterine walls were of a bright rose-red tint, and presented a remarkable degree of succulence. The cavity of the organ was dilated, and contained at least an ounce of pus, which seemed to be retained within it by the flexure of the body upon the neck of the organ, while its lining membrane had exactly the appearance of bright red velvet, though it has now quite lost that character by long immersion in spirit.

I have referred to the extension of gonorrhœal inflammation as one cause of the affection ; sudden suppression of the menses may likewise produce it, as also may unaccustomed and intem-

erate sexual intercourse; while after one attack, the uterus is often left in a condition in which comparatively slight causes will suffice to reproduce it. The symptoms by which it is attended are a sense of pain and weight in the pelvis, with a feeling of heat or throbbing, and much tenderness over the pubes. The pain extends down the thighs, is aggravated by exertion, by sitting on a hard seat, by defæcation, or by any attempt at sexual intercourse; while in this, as in many other affections of the uterus, there is often more or less irritability of the bladder and desire to pass water frequently, the urine being generally high coloured, though not voided with pain. Another symptom, not peculiar indeed to this affection, though observed during its course in a very marked degree, is the occurrence at irregular intervals, of paroxysmal exacerbations of pain of very great severity, lasting for an hour or two, and then subsiding to recur again equally causelessly in twelve or twenty-four hours. Coupled with these attacks of paroxysmal pain, or sometimes occurring independently of them, though usually associated with much suffering, are seizures of diarrhœa, during which the patient has ten or twelve watery evacuations in as many hours, and the bowels then become constipated, and remain so for two or three days. At the commencement of the attack there is no vaginal discharge, but in a day or two an abundant puriform or sero-purulent secretion is poured out, often offensive to the smell, and not infrequently slightly tinged with blood. On examination per vaginam there is always increased heat of the parts, with tenderness amounting to severe pain on touching the uterus, while the vessels of the cervix may be felt pulsating with great force, and the uterus is found heavier than natural, and in many instances obviously increased in size. The tenderness of the organ has always led me to abstain from any attempt at measuring it by means of the uterine sound, but I can readily believe the statement of the late Professor v. Kiwisch, who states that he has found its cavity from six to ten lines longer than natural.*

* *Klinische Vorträge*, &c., 1st vol. 4th edition, Prague, 1854, p. 578, § 249.

The amount both of constitutional disturbance and of local suffering varies greatly in different cases, though, except when the peritoneum becomes affected, it is unusual for the symptoms to be so severe as to warrant any grave apprehension as to the patient's ultimate recovery. There are, however, two other risks besides that of the occurrence of peritonitis, against which it behoves us to be on the watch during the whole course of this affection. The one is that of the ovary, or the broad ligament, being attacked by inflammation, an accident very likely indeed to issue in the formation of abscess; the other is of the acute evil passing into a subacute or chronic stage, in which the suffering is much less, but the prospect of permanent cure less also; and to this latter result all cases of acute uterine inflammation, if let alone or inadequately treated, seem naturally to tend.

The *treatment* of these cases is abundantly simple, the indications are very clear, and mistakes are seldom made in doing what is wrong, though far from unusual in pursuing the right end by inadequate means. Some rules are so simple, and the necessity for them is so obvious, that it seems almost superfluous to insist upon them. Rest in bed in the horizontal posture, a simple diet, and antiphlogistic regimen, and, I scarcely need add abstinence from sexual intercourse, for, indeed, that is usually far too painful to be attempted, are essential to the patient's recovery. Palliatives, however, do not suffice for the patient's cure, but the inflammation must be at once attacked energetically, and depletion can, I believe, never be dispensed with. It is not, indeed, usually necessary to resort to general depletion, but local bleeding is invariably indicated, and in spite of the tenderness of the parts, which makes the patient shrink from the introduction of the speculum or of the leech tube, much more relief is afforded by the application of four or six leeches to the uterus itself than of four times that number to the hypogastrium or the groins. Still, whenever the constitutional disturbance is considerable, or the local suffering very severe, I think it will be your wiser course to take a small quantity of blood from the arm before you have recourse to local bleeding. I dare say you

may have seen the application of leeches to the abdomen appear to aggravate the symptoms in one case of peritonitis while it entirely removed them in another, and may have found on inquiry that in the one case the leeching had been preceded by general bleeding, while in the former, an attempt had been made to employ local depletion as a substitute for it. Just the same thing I have observed in cases of uterine inflammation, and have known the application of leeches to the womb induce a paroxysm of almost intolerable suffering, though the same measure would have relieved a less severe attack, and even in that very instance perfected the patient's cure after general bleeding had been employed. In any case in which you find severe pain coming on during the application of leeches to the uterus, I would advise you to remove the leeches, and to withdraw the tube as soon as possible. A perseverance in the attempt will issue only in a violent attack of pain.

After depletion, the tepid hip-bath and anodynes are the remedies on which we must mainly rely. I will not now repeat, with reference to the comparative merit of different remedies of this class, the remarks which I made when speaking about dysmenorrhœa, but there is one very serviceable medicine, the belladonna, which I did not then mention. It is well, as the strength of the extract varies considerably, to begin with a small dose, as a sixth or a quarter of a grain, in combination with three grains of camphor, and to repeat it every four hours, increasing the dose if no injurious effect is produced by it. Another means of alleviating pain, which in cases of this description has sometimes proved extremely useful, consists in the application of a linseed poultice, into which an ounce of laudanum has been stirred while it was mixing, and this, if covered over with oiled silk or gutta percha, as all poultices should be, will keep warm for many hours, and afford much of the ease which a dose of opium would procure, without its unpleasant consequences.

That irritable state of the bowels which gives rise to occasional attacks of diarrhœa is best controlled by small doses of Hydrarg. c. Cretâ and Dover's powder twice a day, while the attacks

themselves as well as the paroxysms of uterine pain are most speedily arrested by opiate enemata.

It is not possible to lay down any rule as to the repetition of depletion, or the extent to which such bleeding must be carried ; since these questions must in each case be determined by the urgency of the symptoms. If the pain be seated in one or other iliac region, and still more if there be any distinct swelling or even a sense of fulness in that situation, it may be assumed that the ovary has become the seat of inflammation, and leeches must then be applied externally to the number of eight or twelve, and repeated once or twice at intervals of a day or two, till all acute pain and all considerable tenderness have disappeared. Afterwards, the application of a succession of small blisters over the affected part has seemed to me very useful in removing all pain and tenderness, and has I believe the further good effect of reducing the size of the enlarged ovary. With the same view I have sometimes employed an ointment of six drachms of mercurial ointment, two scruples of camphor, and two drachms of extract of belladonna, which is rubbed upon the affected side twice a day ; though usually I confine the use of mercurial remedies to cases where the ailment seems altogether passing into a chronic state, in which permanent enlargement of the womb and induration of its tissue are apt to supervene. In these circumstances a carefully conducted mild mercurial course is often very beneficial, the bichloride of mercury being preferable to other preparations of this drug, from its not readily irritating the bowels or affecting the gums, and from its being quite compatible with the generally tonic plan of treatment which the patient's state usually requires.

In conclusion, two other remarks may be made. The first is that a considerable degree of uterine tenderness is often left behind for many weeks when the organ has been the seat of inflammation, and this not infrequently renders sexual intercourse very painful, sometimes almost impossible. This does not, however, warrant anxiety, for it tends by degrees to disappear ; and with this assurance you must comfort your patient.

The other is, that you cannot, after an attack of uterine inflammation, watch your patient too carefully during the next one or two menstrual periods. It is at these seasons of congestion of the sexual organs that the great danger exists of the flames, which perhaps were merely smouldering, being rekindled ; while if your patient passes safely through that process, you may feel confident that not only the recent evil is removed, but also that no ill consequences have remained behind.

LECTURE VII.

INFLAMMATORY AFFECTIONS OF THE UTERUS.

CHRONIC INFLAMMATION. Discrepancies of opinion as to its frequency; influence of invention of speculum on opinion with reference to it. Conflicting views as to frequency of primary uterine ailment; reasons for taking affirmative side of question.

Theory of dependence of almost all ailments on Inflammation of Cervix, and Ulceration of Os. Characters of ulceration described. Influence of this opinion on practice; its correctness discussed, and reasons for rejecting it. Injurious nature of practice to which the opinion leads, pointed out and explained.

FROM the comparatively rare affection, acute inflammation of the unimpregnated uterus, which occupied our attention at the last lecture, we pass by a natural and easy transition to the study of cases in which *inflammation of a more chronic character* attacks the organ, or is left behind after the subsidence of active disorder. Some twenty years ago, this subject also might have been treated briefly, and have been dismissed speedily; but at the present day it may not be so passed over. Inflammation of the uterus is now regarded by many writers as the most frequent of all diseases of the organ, and its consequences as so far-reaching that they may persist for many years, disturbing its functions, altering its structure, and outlasting in their ill effects even the period of sexual vigour. This opinion, too, which tends to bring about a complete revolution in theory and practice concerning uterine ailments, is entertained by persons whose authority is entitled to such weight, is enforced by arguments which seem so plausible, and supported by an appeal to such large experience, that if it do not at once compel our acquiescence, at least it cannot be rejected without much consideration and careful examination.

Unwillingly, therefore, I find myself compelled to quit that simple exposition of generally received truths which is the main object, and constitutes the chief utility of elementary teaching, to place before you opposing views and conflicting statements, and to point out to you the reasons why this opinion appears to me erroneous, and the practice founded on it unsound.

This, however, is neither a very short nor a very easy task. I cannot even enter on it without first asking you to look back with me to the state of knowledge concerning the structure, functions, and diseases of the uterus some thirty or forty years ago. It is only by a just appreciation of the state of science, then, that you will be able to understand how its recent increase has yet left room for such wide discrepancies of opinion ; how one discovery overrated, and another undervalued, may possibly for a time have ministered to the furtherance of error rather than to the advance of truth ; or at least have mingled them together in a confusion which we need additional light to enable us to disentangle.

So lately even as thirty years ago, neither was the structure nor were the functions of the sexual organs at all correctly understood. The uterus, it is true, was known to be muscular ; but neither the process by which its muscularity becomes so marked during pregnancy, while it ceases to be clearly apparent soon after delivery, nor the intimate nature of its structure in the virgin state, had been the subject of inquiry. The interior of its neck was seen to be invested by a membrane arranged in folds, between which minute glands or follicles were present in great abundance ; but the existence of a distinct lining membrane in its cavity was rather inferred from the results of observation in some forms of disease, than demonstrated by anatomical investigation in a state of health. Though the structure of the ovaries was in the main understood, yet the ovarian ovule had not been discovered, and the function of the ovaries was supposed to be called into exercise only under the stimulus of sexual congress. Hence it resulted that the import of menstruation continued to be a riddle unread ; all that was certainly known about it being

that it was a function which bore an important though undefined relation to the generative process.

When the knowledge of healthy structure and of natural function is defective, the knowledge of diseased structure and of perverted function must be imperfect too. It was assumed that an organ of such dense structure as the unimpregnated uterus was little liable to inflammation and its kindred processes, though in some rare cases the neck of the womb was allowed to be their seat. Its lining membrane, supposed to be so rudimentary in the unimpregnated state, was not thought worth consideration among the possible seats of disease; and leucorrhœal discharges, imagined to be almost always furnished by the vagina, were usually regarded as the consequence and the index of general debility. The different morbid growths were not properly discriminated: scirrhus, a disease of extreme rarity, was assumed to be of very frequent occurrence; and to it were attributed almost all chronic affections of the neck of the womb attended by induration of its substance and increase of its size.

In this state of knowledge, when observation must have been perpetually clashing with preconceived opinions, M. Récamier first thought of employing an instrument—the speculum—for the more convenient application of local remedies to cancerous ulcerations of the womb. Its use, however, was not long confined to this object; for practitioners found that by means of it they were enabled to discover various morbid conditions of the uterus with which they were previously unacquainted, and to which it was but natural to attach importance as the probable cause of many before inexplicable symptoms. In fact, by its means one important question was speedily and decisively set at rest; for leucorrhœal discharges were ascertained to be derived in great measure not from the vagina but from the uterus, to be associated with various diseased appearances of its orifice, and to be, sometimes at least, removed by different remedies directed to that part and to the neck of the womb. So long as the lining membrane of the uterine cavity was supposed to exist in the unimpregnated state merely in a rudimentary condition, it was

most natural that an exaggerated importance should be attached to the various morbid appearances of the os and cervix uteri ; and so long as the ovaries were believed to be called into activity only at the time of sexual congress, it was to be expected that their share in the production of diseased phenomena should be rated very low. Ignorance with reference to these points was shared alike by the advocates of the employment of the speculum and by the opponents of its use ; and under these circumstances their controversies were not likely to lead to any satisfactory result.

We need not indeed wonder that the disputants on both sides, thus imperfectly furnished for the debate, should have narrowed the question to one of details touching the expediency of employing an instrument which some pronounced to be all-important, whilst others denounced it as useless, mischievous, and even immoral. It must be obvious, however, to us who enjoy the advantage of the additions to physiological knowledge which the past quarter of a century has brought with it, that the subject which we have to consider is one far more extensive than the propriety of adopting or rejecting a certain means of diagnosis and method of treatment ; and that it really concerns the opinion which we entertain with reference to the main principles of uterine pathology. Regarded in this light, what might at first have seemed a trivial inquiry at once assumes a grave importance, and becomes, I think, deserving of our most serious attention.

The constitutional origin of local diseases has, ever since the time of John Hunter, engaged, and most deservedly so, the closest attention of the best practitioners of medicine ; and with the advance of knowledge we find the sympathies to be wider and still wider by which the well-being of the whole organism and that of its various parts are bound together. Illustrations of this fact have abounded in the preceding Lectures : and we have seen how the excess of blood, or its deficiency, or its altered quality, may induce menorrhagia, or render the menstrual flow scanty ; or how other more complex ailments may have a similar effect, or may even cause the function to be

performed with an unusual amount of suffering. But some practitioners, and those especially who reject the novel modes of investigating uterine disease, and who take small account of the facts which those modes have either revealed or have brought into greater prominence than heretofore, apply this explanation to almost all diseases of the womb, alleging that uterine ailment is generally preceded by constitutional derangement, and is mainly dependent upon it, and that, consequently, treatment must be addressed principally to the latter and more subordnately to the former.*

There is another view directly antagonistic to this, which regards the uterine ailment as the primary and more important in almost every instance, and according to which the local disease is everything, the constitutional disorder nothing else than its necessary result. The influence of these latter opinions is apparent in the practice of those who are constantly on the look-out for a mechanical cause of dysmenorrhœa, and who frequently dilate or incise the cervix uteri for its cure, who trace the gravest evils to slight misplacements of the womb, and introduce instruments into its interior to remedy its malposition; or, lastly, who discover in some very small and limited ailment of the mucous membrane of the os uteri an adequate explanation of the most varied and most distant ills, and who as sedulously adopt as their opponents studiously avoid local treatment for the cure of uterine disorders.

I shall presently have occasion to point out to you what seem to me to be the defects in the latter view, but must first call to your mind certain considerations which must, as it seems to me, prevent us from giving implicit assent to the former, since they render it probable that the uterus, more frequently perhaps than any other organ of the body, should be the seat of certain forms of local ailment, and should, consequently, require the frequent employment of local treatment.

* A series of able papers devoted to the exposition of this view, was published by Dr. F. W. Mackenzie, in vols. iii. and iv. of the *London Journal of Medicine*, for 1851 and 1852.

It would not be easy to imagine a state of things more favourable to the occurrence of ailments dependent on venous congestion, or in which those ailments would be more difficult to remove, or more apt to return, than is observed in the case of the uterus during the whole period of activity of the generative powers. The return of blood from the organ, which is rendered difficult by its situation at the lower part of the trunk, is still further impeded by the absence of valves from its veins; while every month for several days together this organ and its appendages are the parts towards which blood flows in superabundant streams. During this period, the natural secretion from the uterus and Fallopian tubes is much increased; the epithelium covering their surface is detached, and reproduced again and again; hæmorrhage breaks out along the whole tract,—and it is not until this has continued for some days that the congestion ceases, and the parts subside once more into their former state of quiescence,—the uterus remaining, however, for a short time heavier, and its tissue looser, and more abundantly supplied with blood than it was before. I need not stop to tell how a slight cause may protract this hæmorrhage, or how some accident may check it; nor need I labour hard to prove that in either case there must be a general disturbance of the functions of the organ—a general impairment of the health of the individual: exhausted in the one instance by loss of blood, broken down in the other by the suffering, both general and local, which the return of the periodical excitement of the generative organs, unrelieved by their customary depletion, cannot fail to bring with it. In what organ of the body does one find a parallel to this series of occurrences?

Again: the uterus is held in its position by supports which allow to it a large measure of mobility, and whose power is generally diminished by the very causes that increase the weight of the body they have to bear. Hence it is very apt to become displaced, and to be displaced in a downward direction, or prolapsed. And such prolapsus not only brings with it a variety of painful sensations, due to the womb dragging upon its liga-

ments, but the moment the organ ceases to be suspended in the pelvic cavity it becomes exposed to shocks of various kinds, to irritation from sources from which it was previously safe. The neck of the womb, even when that descent is not very considerable, becomes a sort of stem on which the organ rests upon the floor of the vagina. In this position it is liable to disturbing causes almost numberless; sitting, riding, exertion of any kind, the very passage of the *fæces* along the rectum, produce pain, keep up congestion, and favour that slow increase of size which seldom fails to occur in parts the seat of long-continued irritation, and which offers one great impediment to the cure of many affections of the womb.

Another peculiar and fertile source of disorders of the womb is furnished by the changes that attend upon conception and parturition, and their frequent interruption. With these changes even in the healthy state, our acquaintance is at present too imperfect for us to appreciate with accuracy the nature of the mischief which may result from their disturbance. We know, indeed, many things concerning these processes of which our predecessors were ignorant; but our increased knowledge is as yet sufficient to show us the difficulties of the problem, not sufficient to furnish its solution. The growth of the pregnant womb is not as it was once supposed to be, a mere increase in size and unfolding of texture of the muscular fibres already present there, but is as much the result of a new formation as is that of the *fœtus* contained within it; its tissues going through the same development from a rudimentary condition to a high organization. Cells elongate into caudate bodies, then unite into fibrillæ, while the mucous membrane increases in vascularity, grows in thickness, and becomes developed into decidua. The small, dense, lowly organized uterus becomes the large, vascular, powerful muscle which we see it to be at the end of pregnancy; when having served as the residence of the *fœtus*, and as the medium through which it derived its support, the organ accomplishes in the act of parturition the last of that wonderful series of processes of which for forty weeks it has been the centre. But even before this

period has arrived, indications of decay have manifested themselves in the changes that have taken place in the decidua; while no sooner is the child born than all the tissues of the womb evince the commencement of similar alterations, which go on with a rapidity such as is observed in no other organ, and in no other circumstances. The muscular fibres undergo fatty degeneration, and to a great extent disappear; nerve-matter ceases to be apparent within the sheaths which had contained it, while even the fibres of elastic tissue interwoven with the muscular substance of the womb lose their distinctness, or become entirely absorbed. The old uterus has done its work and is removed; but in the midst of its decaying fibres the elements of a new organ are developed, and the microscopist tells us of a new generation of spindle-shaped cells which he can discover in its tissue, just like those which existed in the organ before pregnancy began, and which remain stationary at the same low stage of formation, till in their turn excited by impregnation to go through higher phases of development.

In these changes the body of the uterus, and the lining of its cavity, bear a far greater part than either the substance of its cervix, or the mucous membrane which lines that canal. The mucous membrane of the body only is developed to the decidua, and it alone is thrown off after delivery: the lining membrane of the neck undergoes much slighter alterations, and is not deciduous. It is in the body of the uterus that its muscularity is most evident; firm fibro-cellular tissue predominates in the cervix, with which are interwoven here and there bundles of narrow, smooth, muscular fibres; and the stimulus of pregnancy which works such changes in the former situation, brings to pass far slighter alterations in the latter.

Though our knowledge is still but imperfect, we yet know something of the results which often succeed to accidents that interrupt the course of pregnancy, and originate the processes of degradation of the uterine tissue prematurely; or which follow on disease succeeding to delivery at the full period. Some of these results were pointed out to you in the last Lecture, when I was

speaking of deficient involution of the uterus, and of the evils which may follow in its train ; while I referred to other ailments of a somewhat similar character which may come on independent of pregnancy as the consequence of some form of irritation or excitement of the womb.

In nearly fifty per cent. of the patients who applied at St. Bartholomew's Hospital for the cure of uterine ailments independent of organic disease, marriage, pregnancy, or delivery was assigned as the cause of the patient's symptoms ; and it is, I think, fair to assume that in this large proportion of cases the disorder was local in its origin, and that the constitutional affection was but the secondary result of its intensity or persistence. Plausible, indeed, as the argument appears that the performance of functions for the discharge of which any organ is expressly constituted cannot be likely to produce disease of that organ, you yet must not forget those peculiarities of the uterus which render it a probable exception to such a rule, while the fact is also not without its significance that of 425 applicants for the relief of non-organic uterine ailments, 404 were married women or widows, and only 21 unmarried.*

But while I mention these facts in order to caution you against underrating the frequency or the importance of uterine ailments as primary disorders, it is far from my object to lead you to suppose either that these disorders have one invariable cause, or that they are the results of one constant pathological occurrence. This, however, or something very like it, has been maintained ; it has been alleged that there is an invariable, or almost invariable cause of these symptoms,—that be the remote

* It is not possible, from the statistics of the out-patient department of a hospital, to deduce anything like a correct estimate of the comparative frequency of different diseases ; and the sources of error are still more numerous in the case of any department of a hospital devoted to the cure of a special class of diseases ; since the more serious of those affections are sure to present themselves at it in a very undue proportion. The statements in the text, then, are not intended to represent the absolute frequency of primary uterine disease, in comparison with cases in which the disorder of the womb is secondary to constitutional ailment, but merely to guard against the assumption that the uterine affection is, in almost all instances, secondary in point of time and subordinate in importance.

occasion of them what it may, inflammation and ulceration of the neck of the womb is their immediate cause,—that the key to the right understanding of uterine diseases is to be found in the correct appreciation of the importance of this condition ; and the cardinal point in their treatment consists in the adoption of means for its cure.

The ulcerations to which such important results are attributed are for the most part mere superficial abrasions of the epithelium investing the lips of the os uteri, whose abraded surface is of a vivid red colour, and finely granular. In other cases in which the absence of epithelium is less complete, the surface seems beset by a number of minute, superficial, aphthous ulcerations, between which the tissue appears healthy, or slightly redder than natural. The ulcerations of the os uteri seldom or never present an excavated appearance with raised edges, as ulcers of other parts often do ; but either their surface is smooth, or it projects a little beyond the level of the surrounding tissue. They are usually, but not constantly, of greater extent on the posterior than on the anterior lip, are sometimes confined to the former, but very rarely indeed limited to the latter. They appear to commence at the inner margin of the os uteri, whence they extend outwards ; and sometimes, though by no means invariably, the short extent of the canal of the cervix uteri which can be brought into view by the speculum, appears denuded of its epithelium. The adjacent parts of the os uteri vary considerably in their appearance ; sometimes their natural pale rose tint is preserved up to the edge of the abrasion, which is marked by a distinct well-defined line, while at other times the whole surface is of a much more vivid red than natural, and the line of demarcation between the abraded and the healthy surface is irregular and indistinct, the one encroaching on the other. The orifice of the uterus is generally more open than in a state of health, and the disappearance of the abrasion, which always takes place from the periphery towards the centre, is accompanied by the gradual closure of the previously patent orifice. The state of the tissue of the os and cervix varies ; sometimes there

is a very marked softness of the parts, the condition resembling that of the uterus soon after abortion or delivery, while at other times it is much harder than natural ; but it certainly is not at all a common occurrence for extensive abrasion of the os uteri to co-exist with a condition of the organ such as would seem healthy to the touch. The secretion from the surface varies considerably in different cases, and the chief part of the leucorrhœal discharge from which the patient suffers is derived from within the canal of the cervix, or from the cavity of the womb, not from the abrasion itself. Still, in some instances, those especially in which the ulceration presents a very marked granular character, the discharge derived from this source alone is far from inconsiderable. The degree of sensibility which the ulcerated surface possesses also varies greatly ; now and then the slightest touch is extremely painful ; but in the majority of cases, the ulcerated surface is not more sensitive than the adjacent parts, nor is the neck of the uterus whose os is abraded by any means constantly more tender to the touch than the same part of an organ entirely free from that affection.

Such then are the chief characters of the ulcerations or abrasions of the os uteri, to which so high a pathological import is attached by some writers. It is alleged in explanation and in support of this opinion, that the mucous membrane of the cervix uteri, by reason of its vascularity and of the abundance of mucous follicles which are imbedded between its duplicatures, is extremely liable to inflammation ; and that this predisposition is still further increased by the abundant afflux of blood towards the neck of the womb, as well as by the position of that part of the organ and its consequent exposure to irritation and injury from various sources. This inflammation of the cervix is said to manifest itself by the secretion of an abundant albuminous matter from the cervical glands, and by the opening of the otherwise closed os uteri ; as also in by far the greater number of instances by abrasion or ulceration of the os uteri, which usually occurs at a very early period. The cervix becomes swollen and congested, and it increases in size ; but while in

some instances it remains soft to the touch even after years of disease, its substance becomes more frequently the seat of inflammation, lymph is effused into it, and it is not merely enlarged, but indurated—a change which takes place to a greater degree in those who have given birth to children than in the unmarried or the sterile. The different extent of the ulceration is the only cause assigned for the presence of induration of the cervix in one case and its absence in another; but the relation of the two conditions does not seem to be by any means invariable. The degree to which the ulceration spreads appears also to be uncertain; in the great majority of cases it passes more or less deeply into the canal of the cervix, and sometimes occupies its whole extent, the internal os uteri, however, forming a barrier to its further progress, and preventing almost invariably its extension into the cavity of the womb. It is then inflammation, with its attendant ulceration of the os and cervix uteri, and usually with consecutive induration of its tissue, to which, according to these views, the sufferings of the patients are due; and all the varied disorders of the uterine functions, the pain, the leucorrhœa, the hæmorrhages, the sterility, or the frequently occurring abortions, are attributed to the sympathies of contiguous parts with that small portion of the womb which is the seat of disease. Ulceration, too, when once it has occurred, is alleged to have scarcely any tendency to heal; while so long as it remains there may perhaps be a lull in the patient's sufferings, and some temporary mitigation of her symptoms; but there can be no real cure until the time when, the period of sexual vigour having expired, the organs which subserved it pass into a common state of atrophy; while cure, even then, is uncertain, and the consequences of disease outlast, by no means rarely, the uses of the part.

As uterine pathology is simplified beyond expectation by the discovery of an almost invariable cause of the most diverse symptoms, so uterine therapeutics also are made easy, according to the writers whose opinions I am relating, by one remedy being found almost always applicable for its cure, be the dura-

tion of the disease or its severity what it may. If the evil be slight, its removal will be speedy; if severe, a longer time will be required: but to modify the vitality of the part by caustics is the one unfailing indication; and, this accomplished, the ulceration and the inflammation and its results disappear together, and the sufferings of years are thus almost infallibly got rid of in a few weeks, or at latest in a few months. There are, indeed, some cases of slight mischief, which rest, antiphlogistic treatment, and vaginal injections, may cure; but these are rare. There are also some circumstances in which the local abstraction of blood may be of service; but what caustics to use, how often to repeat their application, how to prevent or to remove those inconveniences which sometimes result from their employment, are questions discussed as of chief importance; since to these remedies all other local measures as well as general treatment are but secondary and subservient.

Having now detailed these opinions, and pointed out the practical consequences which flow from them, I must occupy the remainder of this Lecture in the endeavour to set before you as briefly as possibly the reasons which lead me to reject the opinions as erroneous, and to caution you against the practice which they are supposed to warrant.

Among the arguments by which these views have been supported, is one derived from the assumed greater vascularity, and higher vitality of the cervix than of the body of the uterus, and its supposed consequent greater liability to become the seat of inflammatory mischief. But not only does a simple examination of the womb suffice to show that blood is distributed in greater abundance to the body than to the neck of the organ, but a consideration of the relative share of the body and of the neck of the womb in furnishing the menstrual discharge, or in the changes which pregnancy and delivery bring with them, must lead, I think, inevitably to the opposite conclusion. Nor, indeed, with reference to these points are we confined to inferential reasoning, but the advanced stage which cancerous disease of the neck of the womb not seldom reaches before either

general illness or local suffering betrays its existence, leads to the same conclusion, while every-day observation has shown that the cervix uteri may be forcibly dilated, may be incised, its tissue may be burnt with the strongest caustics, or with the hot iron, or portions of it may be removed with the knife with an impunity wholly incompatible, as I cannot but conceive, with the assumption that the part is one endowed with high vitality and delicate sensibility.

The results of post-mortem examinations have been appealed to by the opponents of these views in order to negative, by the rarity with which ulceration of the os uteri was observed, the idea of its important share in the production of uterine ailments. To my thinking, however, the very frequency with which this condition is discovered, furnishes a still more cogent reason for regarding it as of comparatively little moment. In seventeen out of sixty-five instances in which I examined after death the uteri of women who died of other than uterine affections, or in rather more than a fourth of the total number, abrasion or ulceration of the os uteri was present.* But though so often met with, this ulceration was usually very limited in extent, and so superficial, as to be unassociated with changes in the basement membrane of the affected surface, and exercising so little influence on the state of the uterus in general as to be unconnected, in a large number of instances, with changes either in the interior of

* TABLE,

Showing the Chief Results of the Examination of Sixty-five Uteri.

Uterus healthy in	36
„ diseased in	29
<hr/>	
Ulceration of os uteri in	17
„ existed alone in	11
„ with diseased lining of uterus in	3
„ with induration of walls of uterus in	3—17
Induration of walls of uterus, without ulceration of os	5
Disease of lining of uterus, without ulceration of os	7
<hr/>	
Total of diseased uteri	29

For the exact particulars of most of these examinations, as well as for the details of the argument condensed in this Lecture, I must refer to my Croonian Lectures, *On the Pathological Importance of Ulceration of the Os Uteri*. 8vo. London, 1854.

the womb, or in its substance ; while induration of the uterine tissue and disease of the lining membrane of the womb were found independently of it or of each other.

As far as it goes, the evidence of anatomical investigation appears to me unexceptionable. It shows the absence of any necessary connexion between ulceration of the os and those other changes of the uterine tissue which have been alleged to be dependent on it, and suggests the probability that an affection which was betokened by no marked symptom during life, and is found associated with no important alteration after death, must itself be of no great moment.

An additional reason for suspecting that the importance of this condition has been overrated, is furnished by what we observe in cases of prolapse, or procidentia of the womb. From the unavoidable irritation to which it is exposed, the neighbourhood of the os uteri becomes in these circumstances almost invariably ulcerated, and this ulceration is usually both extensive and inapt to heal. Now, though the relations of the procident womb differ materially from those of the organ while still in situ, though its sensibilities are unquestionably much blunted by its change of position, yet the general absence of any abundant discharge either from the cavity of the womb, or from the canal of its cervix, as well as of the other symptoms supposed to characterize inflammation of the neck of the womb, cannot but raise a presumption unfavourable to the opinion that ulceration of the os uteri is the all-important affection which it has been assumed to be by some writers.

If, however, we grant that between the procident uterus and the organ still in situ there are differences sufficient to prevent our applying rigorously to the one, conclusions drawn from the other, there is yet another source whence evidence may be deduced to show that the os and cervix uteri are less susceptible to disease, and that that disease has less disposition to increase and to assume a serious character than has been sometimes imagined. There is no class of persons in whom to such a degree as in prostitutes we meet with the conditions best calculated

to inflict local injury on the neck of the uterus. It would therefore be reasonable to expect, if the susceptibility of the cervix uteri have not been greatly overrated, that in these women we should discover with remarkable frequency and intensity an ulcerated condition of the os uteri, an indurated and hypertrophied state of its cervix. Moreover, as a hypertrophied cervix uteri returns, even in favourable circumstances, extremely slowly to its original size, there would be many occasions in which the chronic effects of bygone inflammation must be evident in those who had devoted themselves for months or years to a vicious life.

Observation, however, seems to show that, be the causes of ulceration of the os uteri, of inflammation, hypertrophy, and induration of its cervix what they may, sexual excesses, at any rate, have no great share in their production. I found some years ago on investigating this subject that in twenty-seven out of forty women admitted into the venereal wards of this hospital the os and cervix uteri were quite healthy. In ten more the only morbid condition was a mere excoriation not above a line in breadth, partially or completely circumscribing the os uteri, but associated with no other change of its tissue. In the remaining three the ulceration was more extensive, but in one only of these (and she a woman who had given birth to children) were the lips of the os uteri at all enlarged, while in no instance was there any such alteration of the texture of the part as to deserve the name of induration.

The conclusion which we are warranted in drawing from the inquiry as far as we have hitherto pursued it would seem to be, that the condition of so-called ulceration or abrasion of the os uteri is far from infrequent even in cases where no uterine symptoms were complained of during life; but that it is usually unassociated with other important affections of the uterus such as may be supposed to be the effect of inflammatory action: and further that such affections do not seem to be readily excited by causes acting on the neck of the womb either when displaced or when the organ is in its natural position.

We are bound, however, to go a step further, and to inquire whether, in the case of persons suffering from uterine ailments, there are such differences either in the kind, degree, or duration of the symptoms, according as ulceration of the os uteri is either absent or present, as would enable us to connect with it certain definite consequences, or to say that it tends to certain definite results such as do not otherwise occur?

Considering that in the opinion of some writers,* so large a proportion as 81 per cent. of all women presenting symptoms of uterine ailment are suffering from inflammatory disease of the tissue or canal of the cervix uteri, and 70·4 per cent. likewise from ulceration of the os uteri, this inquiry can scarcely be expected to be difficult to answer. The evidence in support of the importance as well as of the frequency of these affections may fairly be expected to be overwhelming; and the symptoms of ulceration of the os uteri to be characteristic, either from their peculiarity or their severity or from both together; and to differ in important respects from such as attend upon those uterine ailments which are unassociated with that condition.

There is not time in a course of Lectures on the Diseases of

* Dr. Henry Bennet, at page 36 of his *Treatise on Inflammation of the Uterus*, &c., 8vo, 3rd edition, London, 1853, makes this statement. In referring to his work, in order now to express dissent from his opinion, I gladly avail myself of the opportunity to avow my sense of the obligation under which he has laid the profession in this country, not only by the attention which he has drawn to the subject of uterine disease in general, but also by many of his own observations, and especially by his remarks on the subject of uterine displacements, and on the diagnosis of uterine cancer.

While these sheets are passing through the press the first four of a series of papers by Dr. Bennet, "On the Present State of Uterine Pathology," have appeared in the *Lancet*. In spite of statements such as that referred to in the text, and of 226 out of the 359 pages of which the First Part of his book is composed being occupied with the consideration of inflammation and ulceration of the neck of the womb; only thirty-seven with the study of inflammation acute or chronic of the body of the organ, he positively denies having "ever looked upon it as a disease *per se* having a separate existence—a separate pathological entity." Since, however, the whole tenour of his work appears to me most distinctly to assert this very point, since the very modes of treatment formerly advocated are still insisted on as necessary, I cannot regard the observations in this Lecture as at all less called for, in consequence of what appears to me a modification of the theoretical views entertained by one of the advocates of that line of practice from which my own experience leads me to dissent.

Women to carry you step by step through the whole of this inquiry, which some years since I made the theme of my Croonian Lectures. It must suffice then to say that, dividing all cases in which the alleged symptoms of uterine ulceration were present into two classes, according as examination with the speculum discovered that condition or showed it to be absent, I endeavoured to ascertain whether sterility is more frequent, whether the rate of fecundity is lower, and whether abortion occurs oftener in the one class of cases than in the other? Whether menstrual disorder is more common, more severe, or different in kind; whether leucorrhœa is more abundant, or furnished from a different source; or whether pain is less tolerable when the os uteri is ulcerated than when that condition is absent? And lastly, whether similar or different causes produce the uterine affection in the two classes of cases; whether the duration of illness is the same; whether the structural alterations of the womb are alike or diverse?

Each of these questions was made the subject of special inquiry, and the general results, from which more extended observation has not led me to differ, may be summed up as follows:—

1st. Uterine pain, menstrual disorder, and leucorrhœal discharges—the symptoms ordinarily attributed to ulceration of the os uteri—are met with independently of that condition almost as often as in connexion with it.

2nd. These symptoms are observed in both classes of cases with a vastly preponderating frequency at the time of the greatest vigour of the sexual functions, and no cause has so great a share in their production as the different incidents connected with the active exercise of the reproductive powers. But it does not appear that ulceration of the os uteri exerts any special influence either in causing sterility or in inducing abortion.

3rd. While the symptoms are identical in character in the two classes of cases, they seem to present a slightly increased degree of intensity in those cases in which ulceration of the os uteri exists.

4th. In as far as could be ascertained by careful examination, four-fifths of the cases of either class presented appreciable changes in the condition of the uterus—such as misplacement, enlargement, and hardening of its tissue, while frequently several of these conditions co-existed. An indurated and hypertrophied state of the cervix uteri was, however, more frequent in connexion with ulceration of the os uteri than independently of that condition.

5th. The inference, however, to which the last-mentioned fact would seem to lead, as to the existence of some necessary relation—such as that of cause and effect—between ulceration of the os uteri and induration of its cervix, is in great measure negatived by two circumstances.

1. That in numerous instances an indurated cervix co-existed with a healthy os uteri.

2. That while in many of the cases in which induration of the cervix existed, the ulceration of the os was very slight, induration was entirely absent in other instances where the ulceration was noticed as having been very extensive.

Since, then, we find that a very great degree of resemblance exists between the two classes of cases; that women of the same age, in similar circumstances, present the same symptoms, leading to the same results, having the same duration, and attended with similar structural changes, whether ulceration of the os uteri is present or absent; it may fairly be inferred, that ulceration of the womb is neither a general cause of uterine disease, nor a trustworthy index of its progress; and it follows, I think, as a necessary corollary, that the endeavour by local remedies to remove this condition of the os is not the all-important object in the treatment of uterine disease, which the teaching and the practice of some physicians would lead us to imagine.

But opinions, such as these which I have expressed, are met not infrequently by the statement, that recovery from various uterine ailments is daily seen to follow the employment of caustic and the application of various local remedies exclusively directed against ulceration of the os uteri. Now, though I may

not fully acquiesce in this statement, it would be worse than idle to deny that, in many instances, the application of caustic to the os uteri has been succeeded by the restoration of the patient to health. The fact, however, admits of a solution, and one involving a principle which finds its application in the treatment of many diseases besides those which are peculiar to the female sex.

It should be borne in mind, that in connexion with this mode of treatment, various other measures are of necessity adopted eminently calculated to relieve many of the slighter forms of uterine ailments. The married woman is for a time taken from her husband's bed; the severe exertion to which either a sense of duty urged, or a love of pleasure prompted her, is discontinued; while rest in the recumbent posture places the uterus and the pelvic viscera in just that position in which the return of blood from them encounters the smallest difficulties. The condition of the bowels, probably before habitually neglected, is now carefully regulated; and the patient's diet, bland, nutritious, and unstimulating, often differs widely from that with which, while all her functions were overtaxed, she vainly strove to tempt her failing appetite. Add to this, that the occurrence of the menstrual period is carefully watched for; that all precautions are then redoubled, and each symptom of disorder, such as on former occasions had been borne uncomplainingly, though often not without much suffering, is at once encountered by its appropriate remedy; while, generally, returning convalescence is met in the higher classes of society by a quiet visit to the country, or to some watering-place, in pursuit not of gaiety but of health; and we have assembled just those conditions best fitted to remove three out of four of the disorders to which the sexual system of woman is subject. But the very simplicity of these measures is a bar to their adoption: for it is a matter of constant observation, that the rules which common sense cannot but approve, but which seem to require nothing more than common sense to suggest them, are just those to which our patients least readily submit. The case is altered, however,

when the same rules are laid down, not as the means of cure themselves, but only as conditions indispensable to the success of that cauterization which, repeated once or oftener in the week, is the great remedy for the ulceration which the doctor has discovered, and which he assures his patient, and with the most perfect good faith, produces all the symptoms from which she suffers. The caustic used in these milder cases, is the nitrate of silver ; the surface to which it is applied is covered by a thin layer of albuminous secretion, which it is not easy to remove completely, and which serves greatly to diminish the powers of the agent, while the slightly stimulating action that it nevertheless exerts seldom does harm ; sometimes, I believe, does real good, though no more than might have been equally attained by vaginal injections, or by other similar remedies, which the patient might have employed without the intervention of her medical attendant.

It would, however, be a matter of comparatively little moment whether the views which I believe to be erroneous were so or not, if their reception involved nothing more than an over-estimate of the value of certain therapeutical proceedings which may in reality be unessential to the patient's cure. But their evil, if they be erroneous, is of a far graver kind, and the manner in which they act injuriously on the patient not hard to understand. No one engaged in the practice of medicine but must have been often struck with the important part which the sexual system plays unconsciously to herself in almost all the diseases of women. The frequent sadness and low spirits in celibacy, the grief, the almost shame of childless marriage, depend on causes more deeply seated than reason can dispel, and are familiar to us as often stamping a peculiar character on the diseases of our patients. To the same cause is due the nervous susceptibility which women often manifest on the least symptom of ailment affecting their uterine system ; to control which, and to prevent the disposition to unconscious exaggeration of their symptoms becomes often one of our most important, and at the same time one of our least easy duties. Any course of proceeding, then,

which, without the most urgent and absolute necessity, directs the patient's attention in the slightest ailments painfully and frequently to her uterine system is in the highest degree objectionable. The patient recovers from her illness, but with the impression that all the sensations that for weeks, or months before, she had experienced were exclusively due to the local disease which had called for local remedies. On the first return of any symptoms resembling them, all her apprehensions are revived lest the same painful investigation, the same distressing manipulations as before, should be again required. The fact that it needs but to watch the beatings of one's heart for a few minutes, in order notably to quicken its pulsations, and to become painfully conscious of its action, is one of the most familiar illustrations of that influence of attention upon the functions of the body, of which, both in health and in disease, we see so many instances. Digestion watched through its different stages with the not unnatural anxiety of a dyspeptic invalid, often leaves him a hypochondriac, unable to take other than certain articles of diet, and those cooked in some peculiar fashion ; while in many instances, neither in the food itself nor in its mode of preparation is there any reason to be found why that alone should be tolerated by his fastidious stomach. More or less discomfort,—often, indeed, much positive pain,—attends in the great majority of women upon the performance of the menstrual function, precedes, or follows it. These pains are now thought to be of more importance than before; their occurrence is watched for, the suffering of one month is weighed against that of the month before, as the woman thinks she finds in its increase or diminution grounds for hope or for apprehension. But the sensations thus attended to increase in intensity and in persistence; the slight ailment, which but for the coming evil that it is supposed to portend, would in a few days be forgotten, is noted with anxious vigilance; and the more it is observed, the more it seems to grow ; she fears she never will be well again, and at length makes up her mind once more to go through the same treatment as before relieved her, though it brought to her the painful reve-

lation of the grave cause on which her sufferings, once thought so little of, in reality depended. Such persons among the poor come to our hospitals, and on questioning them as to their ailments, they at once, and without waiting to describe their symptoms, say that they are suffering from ulceration of the womb; though on examination one finds no traces of it, or at most a little redness of the edges of the os uteri; or it may be even that slight abrasion which I trust that I have shown to be as trivial in importance as it is frequent in occurrence. But though they have no serious disease, they are not the less, or perhaps one might say all the more, real sufferers, and sufferers most difficult to cure. The treatment they perhaps are once more subjected to serves but to confirm the morbid habit of mind which has been gradually increasing upon them, and destroying both their present happiness and their capacity for it in future years.

But though it is my conviction that, in the great majority of instances in which the nitrate of silver is applied to the os uteri, the proceeding is simply superfluous, it yet would not be right to leave unnoticed other cases in which, the neck of the womb being more or less enlarged, stronger agents are employed. On these occasions the caustic potash is generally used, and by some with the view of destroying outright a certain portion of the enlarged cervix; by others, with the intention of getting rid of the enlargement by means of the inflammation which it sets up in the uterine tissue. With whichever object resorted to, the proceeding is confessedly devoid neither of suffering nor of danger. If the caustic be introduced, as is usually done, within the cervical canal, it is allowed that the pain produced, and which sometimes lasts for two or three days, is very intense, causing nausea or sickness, and sometimes even syncope, or occasioning extreme depression, prostrating a patient so completely as to render her unable to quit her bed or sofa for several days. Thus much for the present effect of this remedy, for which its strongest advocates can scarcely lay claim to such an epithet as *jucunde*. But it does not fare better with it as far as *cito* is concerned. The

application of the potassa fusa so as to produce an eschar, implies a subsequent course of treatment with frequent applications of the nitrate of silver for a period of about forty days, at the end of which time, the action of the remedy being supposed to be exhausted, unless the patient is cured, it will be necessary to repeat the same treatment again and again. This treatment, too, it will be observed, confines the patient during the whole time that it is in progress to her room, and almost to her couch, and entails upon her the necessity of one or two examinations with the speculum every week during its continuance. But if it can be said to act neither *cito* nor *jucunde*, it might be hoped that this mode of proceeding had at least the third merit of *tuto*; but it has not. The tendency to contraction or obliteration of the cervical canal after these proceedings, is very considerable, and is referred to as even a frequent occurrence; while inflammation, both of the uterus generally, and of its appendages, is a contingency far from uncommon. Of the last of these accidents I have seen several instances among patients at the hospital, who, previous to their coming under my care, had been treated with the stronger caustics for ulceration of the os uteri.

I will not attempt to follow the advocates of this practice through the explanation which they give of its mode of action; and the rather, since where some see a healthy stimulus to the affected tissues, others discern what they consider to be a dulling, stupifying influence, as they term it, weakening the vital force; while throughout the language used with reference to this subject, there is a mingling of metaphor with scientific terminology, from which it is extremely difficult to arrive at a clear notion of what is meant. I do not doubt but that by either mode of applying the caustic potass, the cervix uteri may be reduced in size; but my dissent from the practice is founded on the fact that it has none of the three recommendations of painlessness, speed, or safety; while my own experience would lead me to believe that when adopted it is usually either out of place or superfluous. During the presence of any

active symptom of inflammation, such a proceeding as the destruction of a portion of the uterine tissue by caustics cannot but be perilous ; after their removal the womb will return slowly, often, indeed, but imperfectly, to its previous size. This return, however, does take place, as far at least as my experience goes, in the immense majority of cases, and takes place as surely, and not much, if at all, more slowly, under just those conditions which best promote the general health, as under a course of treatment which, apart from other evils, confines a woman for weeks and months to her chamber and her couch, to the grievous impairment of her general health, and the utter ruin of her cheerfulness, as on several occasions I have had the opportunity of observing. Moreover, very wide variations in the size of the womb seem to be equally compatible with the healthy performance of its functions, while the special tendency which it exhibits in any circumstances that produce congestion of its vessels to increase in size must never be forgotten in estimating the pathological importance of hypertrophy, either of the whole or of a part of the organ. In this opinion, too, I am further strengthened by the fact that some of the most marked instances of enlargement of the neck of the womb, with increased hardness of its tissues, which have come under my observation, occurred in cases where there was no trace of ulceration either of the os uteri or of the canal of its cervix.

But I must stop here, and reserve for the next lecture the endeavour to show what opinions seem to me better substantiated, and what practice appears more judicious than those which I have hitherto been engaged in criticising.

LECTURE VIII.

INFLAMMATORY AFFECTIONS OF THE UTERUS.

CHRONIC INFLAMMATION AND ITS RESULTS, continued. Evidence of general dependence of symptoms on affection of uterine cavity, and independence of ulceration of os—illustrative cases. Objections answered.

Hypothesis of primary affection of cervical canal considered; and reasons assigned for dissenting from it.

Treatment of these cases; depletion, sedatives, use of mercurials, use and selection of tonics. Vaginal injections. Exceptional cases requiring local treatment of ulceration.

Cases of cervical leucorrhœa; their nature and treatment.

THE last Lecture was occupied almost entirely with the endeavour to point out the fallacy of a certain hypothesis which professed to explain the occurrence of menstrual irregularities, leucorrhœal discharges, and uterine pain, by referring them to a single cause, and regarding them as the invariable, or almost invariable consequences of inflammation of the cervix, and ulceration of the os uteri.

It remains for us now, however, to enquire to what other cause or causes these symptoms may be attributed, and to ascertain, if possible, in what circumstances the local affection of the os uteri is to be regarded as occasioning special aggravation of the patient's symptoms, and as calling for special local treatment.

In the course of former lectures many remarks have been already anticipated, which might otherwise find here a most appropriate place. It can, indeed, scarcely be necessary to repeat what I have already said with reference to the connexion of menstrual irregularity and leucorrhœal discharges with hepatic disorder, or with the gouty or rheumatic diathesis. Such conditions are of themselves amply sufficient to account for symptoms which the patient may refer to the womb; and so

long as they are unremoved, it is idle, or worse than idle, to attempt a cure by local treatment.

But there is, besides, a large category of cases in which the symptoms date back to pregnancy, delivery, or miscarriage, and in which the enlargement of the uterus, as well as the history of the patient, point to a purely local cause of the ailment. In these cases, however, it is the body of the womb which is the part most affected, since as it bears the greatest part in all the changes which pregnancy brings with it; so any defect in the involution of the organ will leave its body more enlarged, the lining of its cavity more vascular, than are the walls, or the lining of the cervical canal. Often, indeed, but by no means always, enlargement of the neck of the womb accompanies enlargement of its body, but the former is not the occasion of the latter, is, I believe, secondary in the order of time, and subordinate in point of importance.

In forty per cent. of all the cases that came under my observation, the patient's history went back to one or other of these last named exciting causes; for, indeed, it is not possible to conceive of a state of things more favourable than they to the supervention of inflammation and of kindred processes. And if it does come on we find its attack announced by pain of a severer kind, and of a more distinctly paroxysmal character than was before experienced, sometimes, indeed, excruciating in severity; while even in its absence there is extreme tenderness of the uterus, with great heat of the vagina, and usually a very abundant purulent leucorrhœa; often, though by no means invariably, tinged with blood. Moreover, these local symptoms are associated with more or less considerable constitutional disturbance, while on their subsidence the uterine tissue, as far as its state can be ascertained, is felt to be harder in texture than before; and lastly, these symptoms, when once they have occurred, are apt to return at uncertain intervals during a period of many years, presenting on each occasion the same character, amenable to the same treatment, but in spite of it retaining the same disposition to recur over and over again.

In September, 1851, a married woman, aged forty-one, was admitted into St. Bartholomew's Hospital, and told the following history of her ailments:—Having married at sixteen, at which time the menstrual discharge was scanty, and irregular in its return, she at once became pregnant, but miscarried at the third month. A second pregnancy terminated at the full period, after a lingering labour of two days and a half duration, in the eighteenth year of her age; and a third pregnancy soon afterwards likewise terminated prematurely at the fourth month. Her symptoms dated from the time of her lingering labour, and consisted of leucorrhœal discharge, sometimes very copious, occasionally also very offensive; constant sense of discomfort in the uterine region, with occasional sharp stabbing pains, chiefly referred to the right groin, and always aggravated at a menstrual period; while the menstrual discharge, which for years had been gradually increasing in quantity, and was now extremely profuse, was always succeeded by temporary relief to the patient's sufferings. The pain and the hæmorrhage together had worn down her health; her countenance was anxious, and her pulse 128, and feeble. The uterus was found to be rather low down, but not much enlarged, though very tender: the cervix uteri was indurated, somewhat elongated, and very painful; and the os uteri, which was small and circular, presented no trace of abrasion either affecting its lips, or extending into the canal of the cervix, though the congestion of that part was very marked. Rest, frequent local leeching, and sedatives, relieved the patient's sufferings, improved diet restored her strength, and when she left the hospital in November, she had lost the sense of pain and bearing down; there was but little leucorrhœa, the tenderness of the uterus was much diminished, and the congestion of its orifice had entirely disappeared. It may be added that once during the course of her treatment, superficial abrasion of the os uteri showed itself, but disappeared of its own accord in a few days. Great as the relief was which this poor woman had obtained, I did not anticipate that she would continue free from suffering if she returned home to bear a part in the duties,

and to submit to the hardships which are inseparable from poverty.

Accordingly, in less than twelve months she returned to the hospital, presenting the same symptoms as before, and submitted to a similar plan of treatment with the like result. The os uteri on this occasion also presented no abrasion, though frequent examinations were made with the speculum to ascertain this fact. The patient remained this time somewhat longer than before in the hospital, and took small doses of the bichloride of mercury, for several weeks, though never in such quantities as to affect the mouth. For six months after her discharge, she continued almost free from suffering; but in September, 1853, her symptoms began to return: menstruation, though not so profuse as before, became once more very painful; and for some days before her admission into the hospital, on October 20, she had paroxysms of such intense severity that she rolled about the bed in uncontrollable agony, which large doses of sedatives were unable to subdue. On her admission there was the same intense congestion of the os uteri as on former occasions, with a very abundant, highly offensive, purulent discharge, slightly tinged with blood from its interior; the womb itself being low down, somewhat larger than natural, and the cervix large, hard, swollen, and intensely tender; but no trace of abrasion of the os was perceptible. The application of six leeches to the uterus was followed by bleeding so profuse as to cause syncope; but for several days subsequently the patient continued perfectly free from pain, and though it afterwards returned, yet it never again attained the same degree of intensity. She remained in the hospital for six weeks, during which time local leeching was occasionally resorted to; small doses of the bichloride of mercury were again given, together with the syrup of the iodide of iron; and under this treatment improvement once more took place, and the neck of the womb, at the time of the patient's discharge, was at least a third smaller than it had been at her admission.

This case I have related, both for the illustration it affords of

the treatment by which these symptoms should be encountered, as well as because it displays the symptoms in their severest form, and recurring with that pertinacity which is one of the most painful characteristics of this class of ailments. I apprehend that one does not err in connecting the commencement of this patient's illness with some inflammatory affection of the mucous membrane of her uterus, which supervened upon her delivery, and which, during the many subsequent years, was every now and then lighted up afresh by causes such, as in the household of the poor, are not far to seek. It would not be difficult to multiply cases of this description; but in further exemplification of the subject, I will just refer to one other of a kindred nature. In some few, happily very few cases, the inflammation, which in gonorrhœa is usually limited to the vagina, not only attacks the mucous membrane of the bladder, but affects the lining of the uterus also, and even extends to the peritoneum, sometimes endangering the patient's life. But without causing these most formidable results, acute inflammation of the vagina sometimes extends beyond its original seat, and gives rise to symptoms such as we are now considering. A patient, aged thirty-five, was admitted into St. Bartholomew's Hospital, complaining of dysuria and frequent micturition, of painful and profuse menstruation, and of leucorrhœal discharge,—symptoms which she referred to a somewhat severe attack of gonorrhœa three months before. Her uterus was found much enlarged, anteverted, and fixed in its unnatural position, while its tissue generally was much harder than natural, and the margins of the os uteri, though free from the slightest trace of abrasion, presented very marked congestion, and discharge was poured out from the interior abundantly. It is here, I think, no unfair assumption to suppose that all these symptoms, from which the patient had never suffered previous to the gonorrhœa were excited by it, that that had affected the interior of the uterus, and had also bound down the organ in its unnatural position by adhesions consequent on peritoneal inflammation.

It is well to bear in mind, with reference to cases of this and

of a similar kind, that the assumption of inflammation affecting the body of the womb is not sufficiently negated by the absence, in the patient's history, of any mention of symptoms so grave as we might be inclined to imagine that inflammation of the more important parts of this viscus must of necessity produce. In making examinations after death, we constantly find adhesions between the uterus and rectum, or matting together of the parts within the fold of one or other broad ligament, although the patient during her lifetime may never have mentioned any attack of uterine or abdominal inflammation. Not infrequently, too, we find the uterus firmly fixed in the pelvis, with most obvious thickening of the broad ligament, or of the pelvic cellular tissue; while yet the closest inquiry will fail to elicit anything more definite than the statement, that a bad confinement or a bad miscarriage some time before, was succeeded by a painful and tedious convalescence.

Other cases might be mentioned which, I believe, admit of the same interpretation,—cases where the symptoms have succeeded to marriage, or where they have followed suppressed menstruation; nor would I propose a different explanation of those instances in which uterine misplacements, as ante flexion or retro flexion, are succeeded by signs of sexual disorder such as we have been considering, or where they have been associated with misplacement of the ovary. In all of these cases it is, I believe, the interior of the uterine cavity which suffers first; it is thence that the hæmorrhages are derived, thence that the greater part of the leucorrhœal discharge is furnished; and it is the irritation of that part of the organ, in which its most important functions are transacted, that leads to the increase of its size so apparent in the great proportion of cases of long-continued uterine ailment. That the ovaries suffer too, constant observation proves; and facts illustrative of the affection of the neck of the womb are also perpetually coming under our notice; but there does not seem to me to be any proof that, as a general rule, the point of departure of the mischief is in the neck of the womb any more than at its orifice, or in its appendages.

There are, indeed, some writers, who while they concede the comparatively small importance of ulceration of the os uteri, yet appear to me scarcely to attach due weight to the ailments of the uterine cavity. The elaborate secretory apparatus of the cervix uteri, so minutely described, and so beautifully delineated by Dr. Tyler Smith and Dr. Hassall,* seems, indeed, to furnish an ample source for almost any conceivable amount of discharge. But it must be remembered, that like many other secreting apparatuses, this is by no means in constant activity. Its full action seems to be called forth only during pregnancy, and my own observation does not by any means confirm the statement, that in the intervals between the menstrual periods a mucous plug is secreted, hermetically closing, as it were, the canal of the cervix, for I have observed any such secretion, to say the least, quite as often absent as present in uteri which I have examined.

This statement has been made the ground-work of a theory, according to which a sort of antithetical action exists between the cavity and the neck of the womb; the former periodically pouring out the menstrual discharge, the latter periodically forming a secretion by which its canal is closed, until with each menstruation the plug is removed. Hypothetical uses too, connected with the generative process, are assigned to this secretion, against the validity of which its frequent absence is one of the most cogent arguments. In conformity, however, with this assumption of the physiological condition of these parts, it is alleged that leucorrhœa is in general merely a hypersecretion from the glandular apparatus of the cervix uteri, and most of the ills which in this and the preceding lecture have engaged our notice, are regarded as merely the secondary results either of the local irritation produced by the discharge on adjacent parts,

* In vol. xxxv. of the *Medico-Chirurgical Transactions*; and afterwards by Dr. Tyler Smith, in his work on *Leucorrhœa*, 8vo, London, 1855. M. Huguier was, to the best of my belief, the person who in his Lectures at the *Hôpital de l'Ourcine*, published in the *Gazette des Hôpitaux*, for 1847, clearly enunciated the opinion that the main source of leucorrhœa was to be sought in affection of the glandular apparatus of the cervix uteri, and supported this view by very cogent arguments, though for the reasons assigned in the text I have ventured to dissent from the conclusion at which both he and other subsequent writers have arrived.

or else of constitutional disorders excited by purulent absorption owing to the constant presence of the morbid secretion in the vagina.

There is something so attractive in ingenious speculations, that we cannot be surprised if sometimes they are propounded a little hastily, and this is all the more likely to be the case, if the point on which they rest is one which it is almost impossible to determine with certainty by actual observation. I do not for a moment doubt the frequent, perhaps even the constant admixture of secretion from the glands of the cervix with that from the cavity of the womb in ordinary leucorrhœa ; I believe that in some cases which will be hereafter noticed, such secretion makes up by far the greater amount of the discharge. There are some considerations, however, which in the absence of any means of positively determining during the lifetime of our patients, whether a discharge poured out from the os uteri is furnished from the cervical canal, or from higher up in the body of the uterus, or from both, should make us hesitate to assign so little importance to affections of the uterine cavity in the production of leucorrhœa and kindred disorders. Some of the most cogent of these have been already so fully detailed, that it seems almost superfluous to refer once again to the changes that succeed delivery, in which the mucous membrane of the cavity of the womb bears so much greater a part than that of the cervix, and continues to pour out a muco-purulent secretion long after all sanguineous flow has ceased. The history of an ordinary menstrual period affords another illustration of the same fact. The mixture of mucus and epithelium, which at its commencement and end constitutes the greater part of the menstrual flux, is not only assumed to be furnished from the congested mucous membrane of the body of the uterus, but on examination after death may be seen not only in its cavity, but even distending the whole length of the Fallopian tubes. Whence, too, but from such a source could it flow, as it sometimes does in the healthy subject for twelve or twenty-four hours after the cessation of all admixture of blood, since the secretion formed in the cervical canal

must be removed at the commencement of each menstruation, and the periodical functions of the two parts of the womb are assumed to be performed at different times? Nor must it be forgotten, that the mucous membrane of the uterine cavity is provided with appropriate glands, to furnish such secretion, almost infinite in number, curiously convoluted to increase the extent of their surface, and susceptible of a peculiar hypertrophy more remarkable than any which is observed to take place in the glands of the cervix. Observation also not infrequently discovers the membrane of the uterine cavity abundantly moistened with secretion, while now and then accident and disease bear testimony to the same fact, as in the case of the inverted uterus, of which one of the most constant symptoms next to the profuse hæmorrhage is the abundant leucorrhœa, or of the inflamed lining membrane of the womb when some accident preventing the escape of the secretion, the cavity of the organ has been found distended by an accumulation of pus.*

Rejecting, then, the supposition that the symptoms we have been considering are in general due either to ulceration of the os uteri, or to some affection of the glands of its cervix, we come now to inquire into their most appropriate *treatment*. This, as you will readily understand, differs widely, according as the symptoms have anything of an active character, or, on the other hand, are purely chronic, though in both cases the indications to be met are but few, and the means to be employed abundantly simple. So long as acute symptoms are present, or whenever they reappear in the chronic stage of the disorder, local leeching

* There are many such cases on record. In one, the particulars of which are detailed at p. 79 of my Croonian Lectures, and referred to at p. 100 of Lecture VI., a mere flexure of the neck of the womb had prevented the escape of fluids from its cavity, and it was distended by the accumulation of pus within it to the size of a hen's egg. The history of cases of inversion of the womb, as detailed, for instance, in Cross's monograph on that subject, represents profuse leucorrhœa as one of its never-failing symptoms, sometimes indeed, though by no means always, succeeded by a serous discharge, almost continuous in its flow, which takes the place at length, almost or altogether, of the previous hæmorrhages. The profuse loss of blood which accompanies in many instances the small mucous polypi of the cervix, is, on the other hand, ample evidence that hæmorrhage may follow irritation of the neck of the womb, as well as mucous discharge irritation of its body or fundus.

generally affords more speedy and more decided relief than any other remedial means. The leeches should be applied to the uterus itself; not above four in number at a time; nor is it in general expedient to repeat their application above once in a week or ten days. Another precaution to which I think your attention has already been called, consists in never leeching the womb within four or five days of a menstrual period; lest the regularity of that function be disturbed, either by being brought on prematurely, or (which, however, is much less frequent) by its occurrence being postponed for several days. The pain which is left behind after menstruation in some of these cases—in those especially in which the discharge is scanty—is, however, often very greatly relieved by the application of a few leeches as the period passes off. Next to the abstraction of blood, the mitigation of suffering by direct sedatives, claims our attention. After what has been said in former Lectures on this subject, I will now merely remind you that when sedatives may be long needed, the milder the preparation, and the smaller the dose, the less will be the risk of injury to the health from their continuance. The back-ache is often relieved by counter-irritation to the sacrum, which is usually more efficient than plasters of opium, or belladonna; while its good effects, also, are in general less transitory. As suitable a preparation for this purpose as any is a croton-oil liniment, composed of one part of croton oil to ten of the simple camphor-liniment, which should not be rubbed into the sacrum, but merely applied with a sponge twice a day; and while thus employed will somewhat irritate the skin, but without producing any troublesome pustular eruption.

The same means as relieve the uterine pain, seldom fail to diminish the irritability of the bladder by which it is often attended, and which, after the first more acute symptoms have passed away, is very generally associated with abundant phosphatic deposits in the urine. Small doses of hydrochloric acid, with tincture of henbane and the extract and decoction of pareira, are the most serviceable. So long as there is much pain or much uterine tenderness, no local applications nor vaginal

injections will be of service, except such as are simply soothing, as tepid water ; and for the same purpose the tepid hip-bath may be found of benefit. While these measures are employed, absolute rest for a time is needed, though it must never be forgotten, in the treatment of uterine ailments, that there are certain positive evils to which prolonged rest exposes a patient ; both by the general interruption of her health, and also by the almost inevitable direction of her thoughts, during the days of seclusion from her ordinary pursuits and ordinary amusements, to the seat of suffering. At the same time much prudence is necessary in breaking through restrictions ; and even for months after the patient is convalescent, the approach of a menstrual period, the presence of menstruation, and the first few days after its cessation, are seasons when every precaution must be most strictly observed.

If promptly met, the symptoms sometimes pass away gradually, but uninterruptedly ; though the tendency to relapse which each menstrual period brings with it, or which some very slight imprudence suffices to occasion, is one of the most disappointing features of these cases. After several such misadventures, we find the uterus not only enlarged and less moveable than natural, but its tissue generally feels harder, and the cervix in particular presents this character. Leeches will still do something in many instances towards removing this condition ; though it is in general inexpedient to apply more than two at a time, and the result of their employment must settle the question as to the frequency of their repetition. In these cases the bichloride of mercury steadily employed for many weeks, has seemed to me preferable to any other remedy, exercising a decided influence in reducing the enlargement and diminishing the induration of the organ, while it neither irritates the bowels nor affects the mouth, as other mercurial preparations, nor disorders the digestion, nor produces sleeplessness, both of which evils are incidental to the employment of iodide of potass. I prefer giving it in the form of pills, with a few grains of extract of hemlock, and if this be taken in the course of dinner or luncheon, all risk of irritating the

digestive organs is avoided, a matter of no slight importance, where, as in these cases, the appetite is fickle. Some form of tonic is often needed, and few are so little likely to disagree as the liquor cinchonæ. If the bowels become constipated, or the liver gets out of order, accidents very likely to happen, suspension of the tonic for a day or two, and an aperient with two or three grains of blue pill, or a pill containing a grain and a half of grey powder, watery extract of aloes, and extract of henbane, will usually remove the symptoms.

Pain in either iliac region is a very frequent attendant on this condition. A small blister will generally effectually relieve it; or if the pain be scarcely so severe as to necessitate the employment of a remedy from which patients usually shrink, a liniment of belladonna, aconite, and soap, or camphor liniment, may be employed instead.*

Long after other symptoms have passed away, or have at least been very greatly mitigated, there remains a disposition to excessive menstruation, and also to profuse leucorrhœal discharges, due, I believe, to the persistence of congestion, not of the uterine substance only, but of the lining membrane of the womb in particular. This is a state of things for which chalybeate preparations are generally the best remedy, and I know none better than the compound of sulphate of iron, sulphate of magnesia, and sulphuric acid, which I mentioned some time ago.† Another remedy which I have tried with advantage on Dr. Tyler Smith's recommendation as specially adapted to cases where menorrhagia is a prominent symptom, is a compound of alum with sulphate of iron. He speaks of a compound salt‡ which he has employed for his hospital patients; but even in the

* (No. 9.)

R Extr. Belladonnæ ʒss
Tinct. Aconiti (Fleming's) . . ʒiv
Lin. Saponis, co. ʒjss—M. ft. Linimentum.

For this very useful formula I am indebted to a paper of Dr. Oldham's "On the Use of Bichloride of Mercury in Hypertrophy of Uterus," *Guy's Hospital Reports*, 2nd Series, vol. vi. pt. i. p. 161.

† See Formula No. 1, p. 41.

‡ *The Pathology and Treatment of Leucorrhœa*, 8vo, 1855, p. 193.

ough form of extempore prescription, it has seemed to me very useful.

But, besides internal medicines, various external remedies, such as hip baths and vaginal injections, may be employed with advantage in the more chronic stages of this affection. It is true that we, who now believe the main source of the discharge in these cases to be not the vagina, but the uterus, cannot anticipate so much good from their use as was reckoned on by our predecessors, who imagined that the fluid injected into the vagina came into direct contact with the secreting surface whence the leucorrhœal discharge was furnished. Still, mere purposes of cleanliness furnish one very obvious reason why injections should be employed in every case of abundant leucorrhœa; while in addition it may be borne in mind, that almost always, when the ailment is of long standing, a part of the discharge is poured out from the vaginal walls, and some also from the follicles of the cervix, on both of which it may be expected that the medicated fluid will act more or less energetically. The injection also will serve to give tone to the relaxed vagina, and thus to counteract the disposition to prolapsus, which is an almost constant sequela of uterine inflammation, while if fluid be used abundantly, or its injection continued for several minutes at a time, it is also not without decided influence on the body and cavity of the womb themselves.

For any such ends to be gained, however, it is essential that injections be employed much more efficiently than can be done by means of the ordinary syringes, or of the Indian rubber bottles which are commonly used. Dr. Evory Kennedy's ingenious syringe, or even the cylindrical pump syringe, which is a more convenient application of his original idea, both require a degree of strength of hand which few women possess; but a recent modification of the ordinary syringe which I have seen at Mr. Ferguson's, instrument maker, of Giltspur-street, furnished with a foot, that keeps it steady without the use of both hands, appears to me to obviate every difficulty that was experienced in the use of the other instruments. Still more effica-

cious, however, is the douche, which indeed I am accustomed to employ very generally in hospital practice, in all cases where the uterine cavity appears to be the source of the discharge. The only drawback from its use is, that there is a kind of fuss in getting it ready, which induces me in private practice usually to substitute for it the hip-bath. By dissolving half a pound of alum in each gallon of the water of the bath, a very good astringent is obtained. If the patient is apprehensive of taking cold, the bath may at first be warmed to about 70°; and by degrees its temperature may be reduced till it is taken quite cold. The morning is the most convenient time for using it, and the patient should remain in it at least ten minutes, in order to derive any important benefit.

With reference to vaginal injections, the point of most importance in their composition is, that they should be inexpensive and readily prepared by the patient herself. The dilute lead lotion, which can be readily made from the Goulard extract, lotions of zinc or of alum, all have their advantages; while two drachms of tannin, and half an ounce of alum dissolved in a quart of water, form as powerful an astringent as the decoction of oak-bark and alum lotion, which requires much time for its preparation.

I say nothing about the use of intra-uterine injections in cases of long-standing leucorrhœa, for I have no personal experience of their employment, and besides, the risks of the proceeding have led to their almost universal abandonment.*

Though in the great majority of instances these measures suffice for the gradual recovery of the patient, yet to this rule there are occasional exceptions, and local applications are sometimes necessary to bring about the healing of an ulcerated or

* The risk appears to be twofold. In the first place that of exciting active inflammation of the uterine mucous membrane, which however, seems to have been somewhat overrated; and in the next place, of the escape of some of the fluid through the fimbriated extremities of the Fallopian tubes into the peritoneum, and of consequent peritonitis; an accident which, though rare, is yet uncertain in its occurrence, and does not appear to depend merely on the injection of large quantities of fluid. The most recent case of this accident is recorded by Pr. Retzius of Stockholm, in *Neue Zeitschr. f. Geburtsh.*, vol. xxxi. p. 392.

altered condition of the os uteri, which may have persisted, unaffected or but little modified, by the general treatment.

The vivid red appearance of the os uteri, associated with more or less extensive abrasion of its surface, and a slightly granular appearance, which is not infrequently met with during the more active stages of these affections, for the most part alters its character, loses its vivid colour, and finally disappears under the local depletion which the state of the uterus generally calls for. Sometimes, however, it continues, its granulations become large, soft, very vascular, and bleed easily, while the surface furnishes a very considerable quantity of glairy discharge. In this case the os and cervix uteri are usually tender, sexual intercourse is painful, and is often followed by a little bleeding. This condition, like that swollen and granular state of the palpebral conjunctiva with which we are familiar in the purulent ophthalmia of young children, is generally much benefited by extensive scarifications, which may be followed by the daily application of powdered alum on a piece of cotton wool, or by the introduction of a piece of cotton wool soaked in a strong solution of alum. By means of a piece of thread tied to the cotton wool it can be removed by the patient herself in the course of a few hours, though it must always be introduced through the speculum. In the greater number of instances the state of the os uteri becomes so much improved in four or five days that this mode of treatment may be then dispensed with, and the sedulous employment of strong astringent injections will usually suffice to complete the patient's cure. When this is not the case, but the morbid condition still continues, more powerful applications may be needed. The nitrate of silver is not in general suitable in these cases, for its application is often followed by pain and also by bleeding. The acid nitrate of mercury, both in this instance, and also whenever a strong caustic is required, has seemed to me the most useful application; and with moderate care its employment is unattended by risk. When it is used, however, the patient must lie on her back, and one of Coxeter's bivalve speculums being introduced so as thoroughly to expose the os

and include the cervix, a little cotton wool must be carefully disposed all round the edge of the speculum, so as to absorb any of the superfluous acid, and to prevent it from running down outside the speculum, and thus injuring the vagina. A brush can easily be extemporized by trimming a little piece of cotton wool after it is placed in the holder, and the whole diseased surface may then be painted over with the caustic, which immediately forms upon it a white eschar. A piece of dry cotton wool now pressed against the part will absorb any superfluous caustic : the little strips placed around the edge of the speculum may then be removed and the speculum withdrawn. An additional precaution, however, which it is well to take, consists in introducing, before the withdrawal of the speculum, a piece of moistened cotton wool up to the os uteri, whence it may be removed in the course of a few hours by the patient. It is seldom that either pain or bleeding follows this application ; and at the end of a week the eschar will usually be separated, the surface will be found to have lost its fungous character, and cicatrization to be commencing at its edges. A zinc lotion of about five grains to the ounce, or the black wash employed as a vaginal injection twice a-day will now generally be sufficient ; but sometimes the surface puts on an indolent character again, and it may then be expedient to touch it once or twice with the nitrate of silver, and I have occasionally found it necessary to repeat the application of the nitrate of mercury.

Another state which I have but rarely met with, but which seems usually to call for caustic applications, is one in which the os uteri is the seat of a distinct ulcer, with sharply cut edges, its surface apparently a little depressed below the adjacent tissue, partially covered by a thin layer of dirty yellowish lymph, but red and bleeding on its removal. This condition has usually come under my notice in women whose previous history afforded evidence of syphilitic infection some months before, and it has generally disappeared rapidly under one or two applications of the nitrate of mercury.

Besides the two above mentioned conditions of the os uteri,

which are those that oftenest seem to call for caustic applications, I have in other instances employed them almost empirically, where I have found ulceration or some allied morbid condition of the os uteri to exist independent of any appreciable disease elsewhere, or where a morbid state of the os has persisted after the other symptoms of uterine ailment have been subdued. Neither the one nor the other of these cases has, however, seemed to me of frequent occurrence.

Although I expressed my dissent from the opinion that the sole, or indeed, in the majority of instances, the principal source of leucorrhœal discharge, is the follicular structure of the cervix uteri, it yet must not be forgotten that a very copious secretion may be poured out from that part, and that, in some instances, as, for example, in pregnancy, the discharge may be almost exclusively derived from it. The whole glandular apparatus of the cervix uteri undergoes a remarkable development during pregnancy, and exercises its secretory function with an activity which contrasts remarkably with its non-gravid condition; and then also many of the mucous follicles attaining an unusual size without opening and giving exit to their contents, form those bodies which are usually known under the name of the Nabothian bodies.*

But besides pregnancy, there are some other conditions, not very clearly understood, though generally, I believe, connected with some previous irritation of the body of the uterus itself, such as miscarriage leaves behind, or as may be produced by habitual sexual excesses, as in the case of prostitutes, in which the cervical glands become enlarged, and pour out an abundant transparent, albuminous discharge. In some instances, the discharge collects within the cervical canal, and escapes in gushes at short in-

* Further incidental remarks on the much debated question of the nature of these Nabothian bodies will be found in Lecture XIV., under the head of "Glandular Polypi, and Mucous Cysts of the Uterus." It may suffice now, however, to state that the reasons for regarding them as the obstructed mucous follicles of the cervix, which are assigned by M. Huguier, at p. 258 of his paper "Sur les Kystes de la Matrice," &c., in vol. i. of the *Mémoires de la Société de Chirurgie*, seem to me quite conclusive.

tervals. In other cases the discharge is continuous, and may be seen issuing in great abundance from the os uteri, which is usually found open, its lips large but soft, and not tender nor abraded, while the body of the organ is in general quite moveable, and not larger than natural. Between this condition and that in which there is a positive cyst formation in the substance of the cervix uteri, the difference is, I believe, rather of degree than of kind. The distinction between leucorrhœa from this source, and that which is furnished from higher up in the uterine cavity, is furnished by the abundance of the discharge in the former case, its peculiar transparency and tenacity, and the frequent presence of the Nabothian bodies on the lips, or about the edges of the os. In this case too, in spite of the long continuance of the leucorrhœa, it is generally unaccompanied by the graver forms of functional disorder of the uterus, such as menorrhagia, dysmenorrhœa, and ovarian pain; while it is not infrequently associated with a state of irritation of Cowper's glands, which pour out an increased discharge, or even with obliteration of their duct on one or other side, and accumulation of their contents so as to form a small encysted tumour at the inner and lower part of the labium.

I believe this ailment, which is essentially chronic in its course, to be of rare occurrence. It certainly in its severer forms is very difficult of cure, and though rather an annoying infirmity than a serious disease, I have seen one case in which the complete failure of a patient's health seemed to be due entirely to the abundant secretion, which no means succeeded in checking.

The treatment which these cases require is almost entirely local. Something may be done by astringent lotions of various kinds, and especially by such lotions when employed by means of the douche; though you must not forget that the douche is inapplicable whenever a suspicion is entertained of the existence of pregnancy. Astringent hip-baths, too, are of service; while during the persistence of the discharge it is expedient that sexual intercourse be but rarely indulged in.

I have found benefit in some cases from the introduction of

bossils of cotton wool steeped in solution of tannin, or covered with powdered alum, and applied by means of the speculum to the os uteri; but I have made less use than perhaps I ought to have done of the injection of astringent fluids into the cervical canal itself. A very convenient contrivance for this purpose, consisting of a very small elastic bottle attached to a curved silver canula, is to be had of all instrument makers. In some obstinate cases I have cauterized the whole of the interior of the cervix with nitrate of silver, by means of Lallemand's porte-caustique, but without advantage. It seems as if in these cases the action of the nitrate of silver was expended on the copious secretion, and scarcely reached the cervical follicles themselves. Something may probably be done to avoid this evil, by the employment of the douche, or of very abundant vaginal injections to clear the canal of the cervix to some extent just before the caustic is employed. I am disposed to think, however, that in the most obstinate cases it may be expedient to adopt a suggestion of M. Huguier, which I have not yet tried, since, though he made it some years ago, it did not come to my knowledge till recently. He is accustomed* to scarify the interior of the cervical canal with a small, curved, narrow-bladed, blunt-pointed bistouri before introducing the caustic. The previous scarification exposes the more deep-seated follicles, which would otherwise altogether escape the action of the remedy, and while M. Huguier states that he has never known any mischief follow this proceeding, he has by its repetition two or three times effected the cure of cases that resisted every other mode of treatment.

* See the third of his "Lectures on Uterine Catarrh," in *Gaz. des Hôpitaux*, 1847, p. 379.

LECTURE IX.

MISPLACEMENTS OF THE UTERUS.

PROLAPSUS UTERI. Reasons for the mobility of the uterus, and consequent variety of misplacements to which it is liable. Various degrees of prolapsus, and arrangements by which its occurrence is opposed; its causes, tendency to increase, changes in the uterus, and in adjacent parts. Complete Prolapse, or Procidentia.

PROLAPSE OF THE VAGINA;—its relation to prolapse of the womb—may occur in connexion with hypertrophy of walls of canal; peculiarities of this form, and hypertrophy of cervix uteri which it produces. Prolapse of anterior, and of posterior wall, with descent of bladder and of rectum; its causes, character, and mode of production.

AMONG the many wonderful adaptations of means to an important end with which the study of anatomy makes us acquainted, not the least remarkable is the contrivance by which the uterus is suspended in the pelvic cavity, so moveable as to escape any rude shocks from without, or any inconvenience from the varying conditions of the surrounding viscera, and yet so tethered to its place as to ensure its enlargement going on, if pregnancy occurs, in such a direction as shall avoid needless discomfort to the person, or pressure upon, and disorder of the functions of other organs. But this very mobility; without which pregnancy would be a season of uninterrupted suffering, and even sexual intercourse almost impossible, naturally exposes the womb to the risk of changes in its position, such as may themselves become the source of inconvenience, and as call more frequently than almost any other uterine ailments for medical interference.

It is obvious enough, that an organ suspended within a capacious cavity by means of supports which are themselves yielding, must be very likely to be displaced by comparatively trivial causes. In the case of the uterus, too, the risk of its displacement is further increased by the circumstance, that its weight

and size are subject to variations, and that the very causes which tend to render it heavier and larger than natural, have the further effect of diminishing the power of those supports by which it is retained in its natural position. The tendency to misplacement, too, is further encouraged by the pressure from above of the superincumbent viscera, and by all those muscular exertions which a person cannot avoid making in walking, in lifting weights, or even in efforts at defæcation.

All these causes, indeed, tend to produce displacement in one direction—namely, downwards, and accordingly in all but some very rare instances of uterine misplacement,* the organ is thrown lower down than natural, though there are some causes which incline the fundus of the uterus either backwards or forwards, and thus produce its *retroversion*, or *anteversion*, instead of its simple *prolapse*.

Prolapse or *descent* of the womb is so much the most common form of misplacement of the organ, that I will first notice it and those allied conditions in which either the rectum or the bladder becomes prolapsed, dragging in some cases the uterus with it, and will afterwards call your attention to those modifications of its situation in which its fundus is either thrown backwards or tilted forwards.

Prolapsus of the womb, then, which is a common result of any cause that either increases the weight of the organ or diminishes the strength of its supports, may exist in three different degrees for which different names have been proposed, but which it will, I think, be most convenient to designate simply as the *first*, *second*, and *third* degrees of prolapse.

In prolapsus of the *first* degree, the organ is merely situated lower than natural, but still preserves its proper direction, its axis corresponding with that of the pelvic brim, and this even though it should be so low that its cervix rests upon the floor of the vagina.

In prolapsus of the *second* degree, the uterus is situated with

* The preternatural *elevation* of the uterus is not only a rare condition, but also one which of itself gives rise to no peculiar or characteristic symptoms. Some remarks on its diagnostic import in doubtful cases of affection of the uterus or its appendages will be found in Lecture XIII.

its fundus directed backwards, its orifice forwards, so that its long axis corresponds with the axis of the pelvic outlet.

In prolapsus of the *third* degree, or as it is often termed *proidentia* of the uterus, the organ lies more or less completely externally, hanging down beyond the vulva, though it generally admits of being replaced within the vagina, if not of being altogether restored to its natural position.

Now the first question that suggests itself to us with reference to this accident, concerns the manner in which it is brought about, and the mechanism which must be disordered before its occurrence becomes possible. The off-hand reply that the womb is maintained in its natural situation by its ligaments, and that their weakening and stretching are the cause of its prolapse, is neither minute nor correct enough to be of much service to us in practice. The womb is not merely suspended in the pelvis by the duplicatures of peritoneum within which it is contained, but is also supported in its place by the vagina on which it rests, as on a firm though elastic stem. The vagina is yielding enough to allow of the voluntary efforts depressing the womb to the extent of half an inch or an inch, but immediately these efforts cease, the organ would in the healthy state resume its former position, while any further descent of the womb would be at once resisted by the duplicatures of peritoneum, which would be put on the stretch. In the healthy virgin, however, the support afforded by the vagina is very considerable; for instead of being a wide canal with membranous walls far distant from each other, as it appears in so many anatomical drawings and preparations, its two walls lie in close contact with each other, and thus form an almost solid stem for the uterus to rest upon. The curved direction of the vagina further lessens the chances of misplacement of the womb, while at either extremity the vagina is strengthened, by its connexion through the medium of the pelvic fascia with the bladder and rectum above, and by the sphincter which surrounds it below, as well as by the other muscles of the pelvic floor, and by the perineal fascia between the two layers of which those muscles lie.

By these arrangements the very beginning of prolapsus is in the healthy virgin altogether prevented ; but let habitual leucorrhœa relax the vaginal walls, or frequently recurring menorrhagia diminish their resistance, just as the loss of blood robs all tissues of their natural resiliency, and you will at once see that the first step towards the production of prolapsus uteri is already taken. While all things were in a state of health, the connexion of the vagina with the rectum, and thereby with the posterior pelvic wall, would have been the first to offer resistance to the further descent of the womb. If the parts, however, are lax and yielding, this slight resistance will soon be overcome, and the anterior attachments of the vagina not affording any more serious obstacle, the upper part of the canal will become inverted as the uterus descends, and will readily allow it to occupy a position from an inch to an inch and a half lower than its natural situation. In many instances the organ remains in this position, its cervix a little above, or even resting on the posterior vaginal wall, for its further descent is opposed by the various duplicatures of its peritoneal investment. First, the posterior part of the broad ligaments, and the utero-sacral ligaments must be put on the stretch, and then the middle part of the broad ligaments, before any considerable stress will be experienced by the utero-vesical ligaments, or by the anterior fold of the broad ligaments ; and it is owing to the circumstance of the posterior attachments of the uterus tying it down so much more closely than the anterior, that we must in great measure attribute the tendency of the fundus uteri to fall back into the hollow of the sacrum in every case of prolapse of the organ. The round ligaments of the uterus have no share in preventing descent of the womb, their office seems to have reference to the development of the organ during pregnancy rather than to its situation in the unimpregnated state, and the organ must not merely be prolapsed, but must be procident far beyond the external parts, before the round ligaments can be at all put on the stretch, or can be in the least affected by its changed position.

As has been already mentioned, descent of the uterus is not

often the consequence of mere weakening of its supports, but in the great majority of instances the same cause as diminishes the resistance increases at the same time the superincumbent weight. The leucorrhœa or the menorrhagia which deprives the vagina of its tone, is often associated with actual uterine disease, and the organ, enlarged by chronic inflammation or its consequences, is more prone than in a healthy person to sink below its natural position. Such is the history of most of the cases in which prolapsus uteri takes place in unmarried women, or in those who have not recently given birth to children, and in such cases, with the cure of the inflammation and the reduction in bulk of the hypertrophied organ, the vagina will once more regain its proper tone, and the womb, which had been situated only an inch or an inch and a half from the vulva, will, as it were, spontaneously resume its proper position high up in the pelvic cavity.

In most cases, however, it is not in single but in married women that prolapsus takes place, and in them it very generally succeeds to abortion or labour. Everything in these circumstances conspires to favour the occurrence of the malposition, for the womb is greatly increased in weight at the very time when the vagina has lost most of its power of resistance, while the duplicatures of the peritoneum have been so recently put on the stretch by the distended uterus as to be but little able to prevent even the more advanced degrees of misplacement. In not a few instances, too, the tendency to this accident is still further increased by the perineum having been lacerated, and by the whole posterior wall of the vagina having thus been deprived of its natural support by the tearing of the fascia and muscles of the perineum, an accident which has the additional effect of giving to the canal a perpendicular instead of a curved direction.

The general rule of the co-existence in cases of prolapsus uteri of increased weight of the organ with diminished power of its supports, is not, however, without occasional exception. Even in a previously healthy person, a sudden and violent effort, such as the attempt to lift a heavy weight, may sometimes cause the

uterus to prolapse beyond the external parts, just as in another person, or in the other sex, a similar effort might produce a hernia. But while such cases call for no further remark, the occasional occurrence of prolapsus of the womb in old age, in spite of a healthy or even of an atrophied condition of the organ, and in the absence of any exciting cause, requires some explanation. This explanation, indeed, is not far to seek, for it is furnished by circumstances peculiar to that period of life. With the advance of years the fat and cellular tissue which give their rotundity to the labia, and which form a sort of cushion about the entrance of the vagina, become entirely removed; and instead of the vulva being closed, it is scarcely concealed by the shrunken parts. The fat of the perineum is removed; the levator ani becomes atrophied and feeble, and the vagina grows shorter as well as smaller, while it loses its muscularity, and the peritoneal duplicatures their resilience. The womb may now almost spontaneously become prolapsed, since, though shrunken instead of being increased in size, it has almost completely lost the support which kept it in its proper position.*

This somewhat tedious explanation of the different conditions under which prolapsus of the uterus is commonly brought about, shows, I think, clearly why it is that the fundus of the womb is so disposed to fall backwards, why every prolapsed womb is to a great extent retroverted also. You see that the anterior uterine ligaments do not tie the organ so closely in its place as the posterior, and that consequently the liability of the womb to retroversion must always be much greater than to anteversion. You see also how it comes to pass that the uterus when once prolapsed is always extremely likely to remain so. The vagina having once yielded so as to allow of the descent of the womb, can hardly be expected to recover its tone while the patient is going about her ordinary avocations, and the uterine ligaments subjected to daily stress can hardly do other than

* By far the best account of the mechanism of prolapsus uteri, and which I have followed in the text, is given by Kiwisch, *Klinische Vorträge*, 3rd edition, vol. i. p. 171.

yield. But not only is the spontaneous cure of a prolapsed uterus thus rendered very unlikely, but the condition has a constant tendency to pass from bad to worse, and for this simple reason, that the pressure of the intestines from above is always helping to increase the descent of the uterus, always filling up the space which that descent leaves vacant in the pelvis. The prolapse of the posterior wall of the vagina, if at all considerable, is daily aggravated by the efforts at defæcation, and thus the womb pressed on from above by the intestines, is at the same time drawn downwards by the vagina. The close connexion between the cervix uteri and the neck of the bladder is a temporary obstacle to the complete descent of the womb, while at the same time it favours the retroversion of the organ ; but if at length this yields, the urine accumulating in the bladder distends its fundus and the anterior vaginal wall into a pouch which drags down the uterus in front just as the prolapse of the rectum drags it down behind ; and the organ now soon comes to lie beyond the external parts ; the case being thus converted into one of procidentia of the uterus, or of prolapse in the third degree.

But this misplacement of the womb does not happen, or at least occurs comparatively seldom unaccompanied by other alterations both in the organ itself and in the surrounding parts. The womb, subjected to constant and unusual irritation, obeys the law which we observe to be exemplified in almost all the affections to which it is liable, and increases in size by a process of simple hypertrophy, which differs from the enlargement of pregnancy only in the somewhat greater density of the tissue. The neck of the womb is the part in which this alteration chiefly takes place ; for it is the neck which is exposed to the most and the most constant irritation. This enlargement, too, occurs both in length as well as in thickness ; so that the neck of the womb may not only be found nearly of the thickness of the wrist, but also greatly elongated, and the os uteri be thus approximated to the pelvic outlet, not simply by the general descent of the womb, but also in great measure by positive growth of its neck. The lips of the uterus become

enlarged, together with the rest of the womb, and the small transverse aperture which in women who have borne children should represent the orifice of the womb, becomes converted into a wide opening, situated deep in between projecting lips, whose surface, irritated and excoriated, presents, in parts at least, a vivid red, finely granular surface, covered by a copious albuminous secretion. How much this enlargement of the womb must lessen the chances of the organ resuming its proper situation in the pelvic cavity, is obvious without any remark of mine.

There are limits, however, to this increase of the womb, which seems to be most considerable while the organ, though occasionally or partially procident, yet admits of being replaced in the vagina; and in these circumstances I once found the neck of the womb measure eight inches in circumference an inch above the os uteri. In this instance, however, the patient had nine months before given birth to a child; and the uterus, both at that time and also for three years previously, had been occasionally procident; so that its enormous enlargement was probably partially due to the imperfect involution of the organ after delivery. At first it seems almost impossible that so enormous a mass could pass out of the vulva, and be replaced without difficulty, unless the perineum were altogether destroyed. In not a few cases, however, of procidence of the uterus, the whole pelvic floor completely loses all power of resistance; so that, though quite uninjured, it offers not the slightest obstacle to the misplacement or reposition of the womb; an occurrence which, as might be expected, is most frequent in cases where the accident has followed soon after delivery at the full period, when the parts are already stretched and weakened by the passage of the foetus.

In the course of time the occasionally protruding womb comes to lie constantly beyond the vulva, though this procidentia may still for years continue to be only partial; the fundus and a portion of the organ remaining within the pelvis, while the neck and lower part of its body are external. In most instances, however, so considerable a degree of descent of the womb is before long converted into its complete procidentia; the

vagina becoming inverted, and forming the outer walls of a tumour, at the lower part of which the womb is situated. So long as the procidentia is incomplete, this tumour is somewhat pyriform in shape, its base being directed upwards; but afterwards, as it increases in size, it assumes an oval form, owing to more or less of the bladder being drawn down into it in front, and of the rectum also, in many cases, behind. Its bulk is also further swelled, in numerous instances, by the small intestines sinking down into the sac, and thus adding to its size till it equals or exceeds that of the adult head. In a preparation now in the museum of St. Bartholomew's Hospital, the external tumour measured seven inches and a half in length by thirteen inches in circumference, and was found to contain, in addition to the uterus and its appendages, the bladder, and a portion of the rectum, no less than five feet eight inches of small intestines.

The uterus itself, as the above mentioned case well illustrates, forms in many instances only a comparatively small portion of the large external tumour which often exists in cases of complete procidentia. The susceptibilities of the organ seem indeed to be much diminished, and with them its disposition to hypertrophy when it has come to reside habitually out of the pelvic cavity. Sometimes, indeed, as in the case just referred to, the womb appears actually diminished (it measured in that instance less than two inches from its orifice to its fundus), and I believe that the difficulty which may be experienced in the replacement of long-standing procidentia of the uterus seldom if ever arises from the size of that organ. The bulk of the tumour and the difficulty of its replacement depend chiefly upon two causes. Of these, the one consists in the enormous hypertrophy which the vaginal walls undergo. Not only does their mucous membrane lose its ordinary character, and become covered by a layer of cuticle like that of the skin, to protect it from the various sources of irritation to which it now becomes exposed, but the walls themselves attain a thickness of as much as half an inch, and present a dense muscular structure. The other cause of the

bulk of the tumour and of the difficulty of replacing it, arises from the presence of the intestines in the sac, which seldom reside there long without inflammation of their peritoneal covering being set up; not of so acute a character, indeed, as to produce formidable symptoms, nor even as always to call for treatment, but matting their different coils to each other, and tying them firmly to the interior of the sac. This latter cause of difficulty in the attempt to return a procident uterus must not be lost sight of, even though no intestines should seem to have descended into the external tumour itself, for the same slow form of peritoneal inflammation may glue them to each other and to the walls of the pelvic cavity, and thus effectually close up the way against all endeavours to replace the womb.

In the cases which we have hitherto studied, though the point of departure of the whole evil consisted in a weakening of the vagina; yet that step once taken, the prolapse of the womb might be regarded as a primary occurrence, the organ in its descent dragging down the vagina with it. There are, however, other cases in which the displacement of the womb is entirely a secondary accident, following on a giving way of the anterior or posterior vaginal wall, which becomes prolapsed, and in its prolapsus draws down the uterus. It is thus, for instance, that prolapsus uteri is sometimes brought about in cases of ascites, the pressure of the fluid gradually distending the recto-vaginal pouch, till it may even cause the posterior wall of the vagina to protrude externally. A similar effect is sometimes produced in cases of long-continued constipation, in which the accumulation of faeces in the rectum by degrees distends the intestine into a pouch which projects into the vagina, while still more frequently the anterior vaginal wall gives way from the retention of urine in the bladder, and thus produces in the course of time a similar descent of the womb. There is, besides, a form of vaginal prolapse due apparently to hypertrophy of the walls of the canal, in which the position of the adjacent viscera is not altered, though the os uteri is not infrequently found lower down than natural, owing to the prolapsed vagina dragging at the cervix,

and exciting the part to over-growth by the constant irritation which it thus maintains.

Strictly speaking, these different affections of the vagina should be reserved for our consideration by and bye ; but there is such a general similarity between their symptoms and those of prolapsus of the uterus, and so close a correspondence between the principles of treatment applicable to them, that we may very well sacrifice systematic arrangement to practical convenience.

First now with reference to *prolapsus of the vagina* unaccompanied by misplacement of the other pelvic organs, I have already mentioned that it seems to depend in the first instance on a sort of hypertrophy, as the result of which it cannot well be contained within its proper limits, but a fold of it comes to protrude beyond the external parts. Such a hypertrophy of the vagina takes place during pregnancy, for not only does the womb grow to keep pace with the development of the fœtus, but the vagina grows too ;—longitudinally, to allow the womb to ascend high up above the pelvic brim ;—transversely, to afford space for the passage of the child in labour, room for which could not be obtained by any mere stretching of a membranous canal. When labour is over, the vagina in common with the uterus ought to diminish in size by a removal of much of its old material. Sometimes, however, just as we have already seen in the case of the uterus, this involution is imperfect, and the vagina then remains longer and wider, and with its walls thicker than they should be, and as soon as the patient begins to move about again, or to make any exertion, a portion, often the whole cylinder of the lower part of the vagina, hangs down outwardly, an accident all the more likely to take place if the perineum has been injured, or if the levator ani and the fascia at the pelvic floor have lost, as they are wont to do, much of their power of resistance by frequent child-bearing. Why it is that sometimes the vagina continues thus hypertrophied while the involution of the uterus has gone on properly, I cannot say, though of the fact itself there can be no doubt ; for one meets occasionally with cases in which the uterus, still suspended by its ligaments and by the folds of peri-

neum, is little if at all lower than natural, and little if at all altered in size, while the vagina is so wide as readily to admit several fingers, and its folds hang down loosely to, or even beyond the orifice of the vulva.

Although this prolapsus of the vagina is usually a primary affection, and attributable to the consequences of pregnancy and child-bearing, yet this is not so invariably. The prolapse of the vagina appears to be in some instances consecutive to descent of the womb,* but the affection being neglected, the tissue of the protruding portion of vagina may become hypertrophied, and the ailment which was secondary in importance, may by degrees become of greater moment than the misplacement of the womb, and more difficult to remedy.

Though not quite constant, yet the exceptions are but few to the rule that considerable or long-standing prolapsus of the vagina will produce hypertrophy of the cervix of the uterus; not of that portion only which projects into the vagina or portio vaginalis, as it is termed by continental writers, but of the whole uterine neck, of which a specimen, Series xxxii. 30, in the Museum of St. Bartholomew's Hospital, affords a striking illustration. Even more remarkable instances of this kind are on record, the first of which was described by Morgagni.† This occurrence has also been described by some German writers,‡ as a peculiar form of prolapse, under the name of prolapsus uteri without descent of the fundus. That which it is of importance, however, for you to remember is, that long-standing prolapsus of the vagina is almost always associated with a condition of the cervix uteri, which closely simulates ordinary prolapsus, but which as you will hereafter see, must be clearly distinguished from it, since those attempts at mechanically rectifying the supposed malposition which would be of service in true descent of

* Remarks made by Professor Kiwisch, *Klinische Vorträge*, vol. ii., 2nd ed., 1852, p. 413.

† Morgagni, *De Sedibus et Causis Morborum*, folio, Venetiis, 1761, 2nd vol., Epist. 45, Art. 11.

‡ Virchow, in *Verhandl. der Gesellschaft f. Geburtsh. in Berlin*, vol. ii., 1847, p. 205.

the womb, must here be useless, and sometimes may even aggravate the sufferings of the patient.

Of much more frequent occurrence are those cases in which the prolapse of the vaginal wall is partial, involving its anterior or posterior part only, and deriving in the great majority of instances its chief importance from the altered position of the adjacent organs, which descend into the pouch thus formed, and constitute what have been termed by many writers *vaginal rectocele* and *vaginal cystocele*.

In those cases where the anterior vaginal wall gives way, forming a pouch into which more or less of the bladder descends, it is not easy to say what is the first step in the occurrence; whether the vagina draws down the bladder with it, or whether the distended bladder pushes before it the vaginal wall. It is an accident, however, which in the unmarried is even more rare than prolapse of the womb, and its occurrence is traced back in by far the majority of those who suffer from it to a miscarriage or a labour; to a time, in short, at which all the parts were loose, and had lost the power of resistance, while the vagina as well as the uterus was hypertrophied, and had to undergo that process of post-puerperal involution to which I have had such frequent occasion to refer. Sometimes, indeed, though rarely, the patient gives a history of the sudden formation of a swelling at the anterior part of the vagina during some unwonted exertion, just as the womb itself occasionally becomes prolapsed in similar circumstances; while it is easy to understand how a comparatively small prolapse may be converted into a large one during some violent effort when the bladder is full, and consequently exposed to all the force of the diaphragm and abdominal muscles pressing downwards.

The union* is so much more intimate between the anterior vaginal wall and the bladder, than between the posterior vaginal

* The exact relations of these parts are nowhere so well described as by Dubois, *Traité de l'Art des Accouchemens*, pp. 190—199, and pp. 234—243; nor so well delineated as by Kohlrausch, *Zur Anatomie, &c., der Beckenorgane*, 4to, Leipsic, 1854.

wall and the rectum, that we scarcely ever find the vagina alone becoming prolapsed, and dragging itself away from the bladder in the same manner as, in prolapse of its posterior wall, it often becomes separated from the rectum. Further, that part of the bladder which adheres to the vagina includes the orifice of both ureters and the whole of the trigone, extending, indeed, somewhat beyond its limits on either side, so that the urine as soon as secreted collects in this situation, and tends constantly to distend it into a pouch, whose dimensions increase all the more rapidly since its enlargement is not opposed by the weight of the superincumbent intestines and the antagonism of the abdominal muscles, both of which have to be overcome as the distended bladder rises out of the pelvic cavity.

A slight pouch then is first formed in the anterior vaginal wall, scarcely perceptible when the bladder is completely empty, but tense and elastic when filled with urine, though admitting even then of being partially or completely removed by firm pressure upon it, and disappearing altogether, if while this pressure is being made a catheter is introduced into the bladder. In the course of time the small tumour, whose anterior border was felt a little behind the symphysis pubis, enlarges, now and then forming a kind of diverticulum,* with a narrow neck and long pedicle, but oftener forming a globular swelling, which fills up the canal of the vagina, and projects more or less beyond the external parts, when it becomes covered by the same investment of ordinary skin as clothes the tumour in prolapsus of the uterus or vagina. The weakening and giving way of the anterior vaginal wall, however, seldom attains any very great degree without producing likewise some prolapse of the uterus, though the extent of this is by no means constant. Whenever the uterus does not readily yield to the traction made on it by the prolapsed bladder, the anterior lip of the organ becomes hypertrophied, and projects

* As in a case described by Madame Lachapelle, *Pratique des Accouchemens*, vol. iii. p. 387, in which the prolapsed bladder was driven down in this form before the fetal head, and beyond the external parts.

far beyond the posterior ; in a similar way, though not to the same degree as we have already observed to be the case with the whole of the neck of the womb, in cases of prolapse of the whole circumference of the hypertrophied vagina.

The dragging of the prolapsed portion of the bladder upon the neck of the organ, naturally interferes with the functions of the part, and produces frequent desire to pass water, as well as in many instances inability to retain it. Another evil* which occasionally results from it, (but which I have failed to observe in the few cases where I have been present at a *post-mortem* examination of women who suffered from prolapsus of the bladder, probably from want of directing special attention to the point,) consists in a degeneration of the kidneys themselves. The ureters being not only drawn down and stretched, but also in some instances even pressed upon as the pouch of prolapsed bladder projects under the symphysis pubis, the urine with difficulty flows along them ; and both they and the pelvis of the kidneys themselves become dilated, with a corresponding atrophy of the secreting substance of these organs.

Prolapse of the posterior vaginal wall is in its slighter degrees of more common occurrence than prolapse of the anterior, and when the perineum has been torn in labour, scarcely ever fails to take place. It does not, however, constantly bring with it prolapse of the rectum in the same manner as the giving way of the anterior vaginal wall is constantly associated with prolapse of the bladder, since the loose cellular tissue which connects them allows of a tolerably ready separation between the two canals, and the rectum may still retain its natural situation. If, however, the laceration of the perineum has been considerable, or if independent even of any such condition, the bowels have been habitually allowed to be constipated, the lower part of the rectum bulges out into a *cul-de-sac*, in which faecal masses become retained and indurated, causing, in addition to the ordinary

* Referred to, both by Kiwisch, *Lib. cit.*, vol. ii. p. 422; and by Virchow, *Loc. cit.*, p. 209 ; by the latter of whom it is more fully described.

annoyances of prolapsus, much discomfort, sometimes even much suffering in the act of defæcation. It is to the influence of constipation in producing this ailment that must be attributed the comparative frequency with which it is observed, independent of pregnancy and child-bearing; and its importance arises in great measure from its aggravating that state of the bowels to which its original occurrence was mainly due.

LECTURE X.

MISPLACEMENTS OF THE UTERUS.

PROLAPSUS UTERI. Symptoms of its first and second stages; pain, its causes and character, disorder of uterine functions, and of general health. Symptoms of third stage; influence of misplacement on adjacent organs: difficulty of return of long-standing procidentia. Peculiar symptoms of prolapsus of bladder and rectum described and explained.

Treatment of Prolapsus varies according to its cause and degree. Cases requiring or not requiring mechanical support, distinguished; pessaries, their uses and varieties; external supports and bandages.

Management of Procidentia; cautions as to replacement of uterus; treatment of ulceration of its surface. Operations for its permanent cure considered. Irreducible procidentia; extirpation of womb.

AFTER the study of the manner in which some forms of misplacement of the uterus and parts therewith connected are produced, we come next to inquire into the *symptoms* to which those misplacements give rise. These symptoms depend partly on the changes in the relations of the various organs produced by their altered position, or by the altered position of the womb itself; partly on direct disturbance of the uterine functions, and partly, too, on the sympathy of distant organs with the ailments of the womb itself. None of these symptoms, however, are constantly proportionate in severity to the degree of misplacement, so that one woman will suffer most acutely from comparatively slight descent of the womb, while another will pursue laborious avocations, apparently little distressed by a prolapsus so considerable that the uterus is with difficulty retained within the canal of the vagina.

As a general rule, the patient suffers most in those cases in which the occurrence of prolapsus has been somewhat sudden, and in which it does not succeed to previous delivery or mis-

carriage. The reasons for this are obvious enough ; the dragging at the uterine ligaments and duplicatures of peritoneum must be much more painful when they have been suddenly stretched, than when, already loose and yielding, they give way under the weight of the uterus which they are prematurely called upon to bear. Hence it is that comparatively slight prolapsus in the unmarried is often attended with far more distress than a much greater amount of displacement in women who have given birth to children, and that the degree of suffering which is sometimes experienced after a night's dancing, or a fatiguing ride on horseback, seems to point to an ailment far more serious than slight prolapsus of the womb.

Women designate the peculiar pain which they experience in cases of prolapsus uteri by the expressive term, "bearing down;" a sensation as though the pelvic viscera were about to fall out ; and to this is often added on very slight exertion, such as in walking, in lifting anything, or on altering the posture, a sharp pain, due to a momentary increase of tension of the uterine ligaments, which compels the person to stand still, and often to bend slightly forwards so as to remove as far as possible all pressure from above, and thus to await the cessation of the pain. The effort at defæcation is often extremely painful, from the very circumstance that it puts all those ligaments upon the stretch, while, when the womb has descended so far that its cervix habitually rests upon the floor of the vagina, there is frequently superadded a sense of desire to empty the rectum, a sort of tenesmus which is very distressing. The uterus too becomes now exposed to shocks from various external causes from which it was before defended ; and sitting on a hard seat, or placing herself in any posture in which the perineum is pressed on, causes the patient extreme pain, so that she is compelled to study her attitudes, and carefully to adjust her position. With these discomforts there is almost always associated more or less of that pain in the back which is the nearly constant attendant upon uterine ailments of every kind ; and in some instances there is also an extreme degree of tenderness or sensitiveness in the

hypogastric region, which is not aggravated by slight pressure on the surface, or by gentle friction over it, but on the contrary is often much relieved by it. This abdominal pain is no more special to prolapsus than is the lumbar pain, but both seem due to the radiation of painful sensations from the uterus itself, along the different nervous branches and twigs with which it is either directly or indirectly connected; and hence we find it in many cases of uterine cancer, as well as in dysmenorrhœa, and in very many other chronic ailments of the uterus. Another very distressing sensation often experienced quite in the early stage of uterine prolapsus, and before there is any interference with the position of the bladder, is a very frequent desire to pass water, which the patient is compelled to do every half hour, though with very little relief. In unmarried women, when the uterus has descended so as to lie in the axis of the pelvic outlet, there is besides much distress produced by the os uteri pressing against the hymen; but all of these discomforts are mitigated, many of them cease altogether, when the patient lies down.

Pain, however, is not the only symptom of prolapsus of the womb. The organ thus misplaced is irritated, and leucorrhœal discharges are an almost invariable attendant upon the ailment, while from the same cause the menstrual flux becomes more profuse, lasts longer, or returns more frequently than natural. The blood flows back from the misplaced womb with more than ordinary difficulty, a state of habitual congestion is maintained, which in some instances relieves itself from time to time by profuse losses of blood, though in spite of them the irritated congested organ tends to increase in size, and the womb, thus larger and heavier than natural, becomes less and less likely to resume its natural situation.

The disorders of the general health which attend upon prolapsus of the womb, have nothing in them that is characteristic, but consist of that class of symptoms which attend upon so many uterine ailments, and among which dyspeptic disorders have a very large share, owing to the peculiar sympathy that subsists between the stomach and the womb. Constipation of the bowels

may however be mentioned as an almost constant attendant upon prolapsus, due in part to the distress which in the early periods of the affection accompanies the effort at defæcation ; in part also to the mechanical impediment which the pressure of the cervix uteri on the rectum frequently offers to the passage of the fæces.

In the upper classes of society, the symptoms of prolapsus are almost invariably met by appropriate treatment in the early stages of the affection, so that in them it seldom passes the first or second degree of displacement. There may, however, be exceptions to this rule, in cases where the perineum has been extensively torn, and the vagina has consequently been very much and permanently weakened. The atrophy of advancing age, too, being equally incidental to all, the uterus may even in the wealthy come down so low as to protrude partially beyond the external parts. Now and then, too, even in young women, the perineum after child-birth seems so completely to lose its resiliency as to afford little or no support to the vagina. A small knuckle of the posterior vaginal wall soon becomes prolapsed, so as to project between, though not beyond, the labia ; it here becomes irritated ; and irritated, it soon becomes hypertrophied. The edge of the yielding perineum is dragged down by the vagina, or if an examination be made, is easily carried before the fingers, and seeming thus to constitute a part of the vaginal wall, the sensation of the perineum having been nearly destroyed, is most deceptive ; and sometimes the eye alone can determine whether this is so or not. Now, in this case the vaginal support of the uterus being completely lost, though the mischief is not irreparable as it must be when the perineum is torn, external prolapse of the uterus may here also take place.

The sudden occurrence of external prolapse, or procidentia, when it happens during some violent exertion, or when it takes place all at once during some change of posture a short time after parturition, or in the effort at defæcation, is attended by much local distress, and much constitutional disturbance. In by far the great majority of cases, however, the womb becomes procident only very gradually ; at first but a small part of the organ

protruding, and that only occasionally, and then more of it coming down, and for a longer time, till at last the whole womb lies usually, or constantly, beyond the external parts. With this change of position of the organ, too, there is a change of symptoms; often, indeed, a marked remission of some of those which were the most distressing; for the sensibilities of the womb appear to be greatly blunted when once it becomes an external organ, and injuries and interferences which it could not bear while in its natural situation, seem to be of but small importance when it has left the pelvic cavity.

The alleviation of the patient's symptoms, however, owing to the cessation of the vaginal leucorrhœa, and the gradual blunting of the uterine sensibilities, is generally more than counterbalanced by the supervention of suffering from other sources. With the increase of the procidentia of the uterus, the positions of the other pelvic organs become more and more disturbed; the bladder is drawn down into the pouch in front, and the natural relations of the urethra are often so altered that the canal runs perpendicularly downwards, instead of in a horizontal direction. This misplacement necessarily brings with it much difficulty in emptying the bladder, while accompanying it there is generally a frequent desire to void the urine, and by these two symptoms the patient's life is rendered miserable. In a similar manner, though not so invariably, the rectum is drawn down behind, and difficult defæcation is thus superadded to the other symptoms. Nor is this all, but the descent of the small intestines into the pelvic cavity to occupy the space which the uterus and adjacent viscera have left vacant there, disturbs their proper functions, and gives rise to various sensations of pain and discomfort in the abdomen, to which is not infrequently added the distress from inflammation of the peritoneum, a chronic form of which seldom fails to be set up.

The external tumour is, besides, itself the source of much distress. In spite of the thickening of its tegument, the irritation produced by exposure to the air, and by all the forms of external injury from which it is impossible to shield it, as well as by the

passage of the urine and fæces, seldom fails to produce ulceration of its surface. This ulceration generally occurs in large patches upon the most exposed parts; as, for instance, at the sides, where the tumour is exposed to friction by the thigh; below, where it is rubbed when the patient sits or lies, and at the upper part, where it is apt to be made sore by the passage of the urine. The ulcers are seldom deep, but are usually irregular, with raised edges and an indolent surface, and are very indisposed to heal. The os uteri, too, from its position at the lower part of the tumour, and its consequent exposure to irritation, as well as from the delicacy of the membrane in this situation, is almost always the seat of an ulcer or excoriation. This ulceration, too, is often of considerable extent;* not simply from the circumstance that the lips of the os partaking of the general hypertrophy of the womb, present a large surface, but also because the continual dragging of the inverted vagina tends to draw the lips of the uterus upwards and apart from each other, and thus produces a very considerable inversion of the mucous membrane of the cervical canal, which soon becomes excoriated. The replacement of the uterus restores the parts to their natural relations, and the large external ulceration passes almost out of sight into the canal of the cervix.

The existence of prolapsus uteri, though no bar to conception, often renders pregnancy a period of very considerable suffering. The slighter degrees of descent of the womb, indeed, are often cured by pregnancy, since the uterus as it enlarges gradually ascends in the pelvis; and the temporary relief thus afforded may be rendered permanent by care during gestation, and a long observance of the recumbent posture after delivery. When the misplacement, however, is considerable, and especially when the uterus has already been partially procident, the effect of the enlargement of the womb is to make it descend still lower, so that a considerable portion of its lower segment, as well as its

* This fact, of the correctness of which any one can readily satisfy himself, was, to the best of my knowledge, first noticed by Scanzoni, in a note at page 178 of the 4th edition of vol. i. of Kiwisch, *Klinische Vorträge*.

greatly enlarged cervix, protrude permanently during a great part or the whole of pregnancy. All the symptoms to which prolapsus ordinarily gives rise are experienced in these cases in an aggravated degree, and miscarriage not infrequently takes place, partly owing to the disturbance inseparable from the misplacement of the womb, partly owing to the want of space in the pelvis for the further enlargement of the organ, which is unable to rise as it ought to do into the abdominal cavity. In some few instances, however, pregnancy runs its course undisturbed, in spite of a great degree of prolapsus; and cases are on record in which the uterus has descended further and further till a great portion of it hung down between the thighs; but the development of the fœtus has, nevertheless, gone on in this unnatural position; and others' still stranger in which coitus has been practised immediately through the os uteri, and impregnation, and undisturbed gestation have followed in spite of the existence of irreducible procidentia.

The causes have been explained which tend to oppose the return of any long-existing procidentia of the uterus; and the same causes, though operating in a less degree in simple prolapsus, yet often interfere with the complete restoration of the womb to its normal situation. By degrees, indeed, a woman not infrequently gets habituated to the discomforts of her position, till at length she seems to be but little inconvenienced by them, and this even in cases of external procidentia of the womb. To this, however, there are many exceptions; and the ulcerations of the surface of the procident organ sometimes become very extensive, assume an unhealthy condition, and partial sloughings of the integument take place; or the mass having been unreturned longer than usual, it becomes swollen, tense, and painful, and all attempts at replacing it prove unavailing. The extreme pain, which in some of these cases attends upon any endeavour to replace the womb, is often due to some degree of inflammation having been set up in the peritoneum lining the pouch into which the intestines descend, at the upper and back part of the prolapsed womb, or of the peritoneal investment of

the intestines themselves ; and death may in these circumstances take place, with many symptoms of the same kind as attend upon fatal strangulated hernia.

Of the two varieties of *vaginal prolapsus* in which its posterior or its anterior wall is displaced, the latter gives rise to by far the more important symptoms. Some degree of prolapsus of the posterior vaginal wall exists, indeed, in very many cases of laceration of the perineum ; and a painful dragging sensation on assuming the erect posture, leucorrhœal discharge, and discomfort from the projection between the labia of a small pouch of vagina, are seldom absent, though by no means in a measure always proportionate to the amount of misplacement. To these are superadded all the inconveniences of constipation, and the distress arising from the impaction of scybala in the rectum, whenever the lower part of the intestine itself becomes dragged down and prolapsed ; while, whenever the ailment is of long standing, or considerable in degree, the uterus is usually drawn down also out of the proper position.

The prolapsus of the anterior vaginal wall, attended as it is by descent of the bladder, is accompanied by a peculiar dragging sensation at the umbilicus, which is distressing in proportion as the bladder is full ; is lessened, or ceases altogether, when that viscus is completely empty. This sensation has been referred, and probably correctly, to the stress upon the suspensory ligament of the bladder, which must be dragged on more and more in proportion as urine accumulates in the prolapsed pouch of the organ. The patient experiences moreover a constant desire to pass water, which very frequent micturition fails to relieve, unless pressure be made from below against the pouch of prolapsed bladder, so as completely to empty the organ. To this becomes superadded in many instances, in the course of time,* an altered condition of the urine, which is turbid, ropy, sometimes offensive, and loaded with phosphates ; owing, in part, to its retention in the prolapsed

* To this cause of alteration of the urine attention was first called by the late Dr. Golding Bird, in a paper published in *Med. Times and Gazette*, 1853, Jan. 1, p. 11.

pouch of the bladder ; in part, also, to irritation propagated to the kidneys themselves. It can scarcely be necessary to say that in these cases, too, the ordinary symptoms of vaginal prolapse will not be wanting ; while reference has already been made to the peculiar effect of descent of the bladder, in causing hypertrophy of the anterior lip of the womb, and afterwards in occasioning the organ to prolapse.

The characters of prolapsus of the uterus or vagina are so well marked, that with the most ordinary care it must be nearly impossible to mistake their import. We may, therefore, pass at once to the examination of the *treatment* best suited to effect their cure.

Here, however, we at once meet with very contradictory opinions and assertions, for while some writers advocate the general employment of mechanical means to keep the misplaced organs in their proper position ; others deny their use, and allege various arguments against them. Without entering into the controversy, we must bear in mind, what the disputants have too often forgotten, that prolapsus of the womb occurs in very different circumstances ; and that its treatment, to be appropriate, must differ too. Sometimes it is the result of causes which add to the weight of the uterus, and thus render its ordinary supports unequal to maintain it in its proper position, while in other instances a weakening of the supports themselves by accident or disease is the first step towards producing the misplacement ; and according as the one or the other of these conditions predominates will the use of mechanical means be expedient or undesirable. Thus, for instance, time, and care, and judicious management generally suffice to remove that form of descent of the womb which succeeds to miscarriage or to labour, wherein the as yet imperfect involution of the organ, and its consequent increase of weight are the main causes of its misplacement, while mechanical contrivances are always needed when the support which the vagina should afford has been destroyed by extensive laceration of the perineum, or greatly enfeebled by the atrophy of old age.

The first inquiry, then, which we ought to make in every case of prolapsus uteri concerns the cause to which the misplacement of the organ is due ; and we must therefore endeavour to ascertain the precise condition of the patient's health previous to the occurrence of those symptoms for which she now seeks our help. In married women we shall often find the commencement of the evil referred to some miscarriage or labour ; in the unmarried, to exertion too severe or too prolonged at a menstrual period, and subsequently aggravated by a like want of care at each successive return of the menses. Rest in the recumbent position, strict attention to the condition of the bowels, the cold hip-bath, and astringent vaginal injections, will usually suffice for the cure of such cases ; and as the hypertrophy of the womb gradually subsides, so will the organ by degrees regain its proper position. Neglect of due precaution at the menstrual periods, leading as it often does to the minor degrees of uterine prolapse, becomes associated, also, with enlargement of the womb, which disappears, together with the malposition, under the same treatment as is appropriate in those cases where the ailment succeeds to delivery. Here, however, especial care is needed, at the return of each menstrual period, to counteract the tendency of the womb to become again displaced ; care, too, which it is often very difficult to induce our patient, who probably feels but little discomfort, to observe. It is by such care, however, rather than by much positive treatment, that we can best succeed in putting a stop to that over-profuse menstruation which is very frequently associated with even the minor degrees of prolapsus. The misplacement of the organ exposes it to irritation ; the irritated and congested organ becomes somewhat increased in size ; and from its vessels, larger and more numerous than when the organ was in its natural position, blood flows more freely ; and all the more so if the patient retains at these times the erect posture, or pursues her ordinary avocations.

In many other conditions the uterus grows larger and heavier than natural, and in some of them, the disposition to prolapsus is even greater than when the size of the organ is due to the in-

completeness of its puerperal involution. The womb though left after delivery much larger and heavier than natural, is not the only part hypertrophied; but its supports, albeit over-stretched and consequently enfeebled, have yet grown, too, and are larger and more powerful than in the unimpregnated state. If, however, the increase of the womb is due to some other cause, such as the congestion of habitual menorrhagia, or the enlargement which attends upon chronic inflammation, prolapsus of the organ will be still more likely to occur, since its increase of weight will have been unassociated with any corresponding development of those parts by which it is retained in situ. The prolapsus here is purely secondary; the enlarged womb may even require local depletion to reduce its bulk, and till this end has been attained, the prolapsus will tend to increase, while attempts to retain the organ mechanically in its proper position, will increase its irritation, and thus prove positively injurious.

If to these cases we add another large class, in which the descent of the uterus is but slight, and is either one result of a general loss of tone in the parts, attendant on a state of debility, or the consequence of some accidental and temporary cause, such as the over-exertion of a long walk, or excessive fatigue, we may conclude that the employment of mechanical support for the misplaced womb, is not necessary or suitable;

1st. In slight degrees of uterine prolapse.

2nd. In cases where the descent of the womb, still comparatively recent, is due to the persistence of the state of puerperal hypertrophy, owing to imperfect involution of the organ after abortion or labour.

3rd. In cases where uterine disease of whatever kind was the occasion of the misplacement of the organ, such disease being still in a stage calling for treatment.

On the other hand, mechanical means of some kind or other, are generally appropriate;

1st. In all cases of external prolapse, or procidentia of the uterus.

2nd. In cases of long standing prolapse in the second degree,

associated with much relaxation of the vagina, and consequent weakening of the uterine supports.

3rd. In all cases of extensive laceration of the perineum, and for a similar reason, in cases of prolapsus in the aged.

4th. In cases of the minor degrees of prolapsus which are accompanied by extreme distress or violent pain.

5th. In all cases of considerable prolapsus of the vagina, with or without descent of the rectum or bladder; and in all cases in which the uterine prolapsus is secondary to any of those other forms of misplacement.

The supports which are used in these cases are intended either to keep the womb in its proper position, or to afford relief to the painful sensations that accompany its misplacement.

They are either internal or external, the latter being various descriptions of bandages which exert counterpressure in different ways on the sacrum, the perineum, or even the pubes; while the former act immediately on the displaced organs themselves. The internal are called pessaries, from the Greek *πείσσοι*; the ancients being accustomed to introduce medicated substances for various purposes into the vagina.*

There are two different kinds of pessaries; namely, those which when introduced are maintained in their position by the vaginal walls themselves, and those whose support is external to the vagina, and supplied by means of a bandage or some similar contrivance, to which they are attached by means of a stem. Each of these kinds has its advantages in certain cases, while obviously we have no choice but to employ the latter in many

* It was for the medicinal virtues of their composition, not for their mechanical utility, that these pessaries were employed by the ancients. Thus, for instance, in the Hippocratic oath the candidate vows to abstain from the use of pessaries to destroy the fœtus; and it is to the supposed remedial virtues of their constituents that Celsus refers in the twenty-first chapter of his fifth book. Their name is derived by some from their supposed therapeutical power, *quasi πείσσειν, mollire*; but by others from *πέσκος*, the skin of an animal with the wool on it, in which the materials of the pessary were wrapped previous to being introduced within the vulva. These pessaries were employed in cases of prolapsus uteri; but as a means of applying astringent remedies, rather than of mechanically retaining the uterus in its position; and it is only within the past two centuries that their mechanical utility has come to be chiefly, if not exclusively regarded.

instances where the perineum has been so torn as greatly to enlarge the orifice of the vagina, and thus to render its walls incapable of retaining the pessary.

A pessary ought to be light and smooth, in order that by its weight it may not further weaken the lax and yielding vaginal walls, nor increase leucorrhœal discharge by its irritating qualities. It is also desirable that it should not press unequally, nor upon a very limited extent of the vaginal wall, but that the support it gives should be uniform, and distributed over a tolerably large surface. Now these conditions are best fulfilled by a pessary of a globular or slightly oval form, and made of wood or some other material to which a perfectly smooth surface can readily be given. Hollow metallic pessaries have been recommended by some writers, but the expense of employing any of the precious metals must always be a bar to their use ; while pessaries of box-wood answer every important purpose. Indian-rubber has many advantages in its softness and elasticity, but it is by no means so cleanly as wood, and is easily acted on by the vaginal secretions. The globular pessary is especially useful in cases of prolapse in the first degree, where the descent of the womb, so that its cervix rests upon the floor of the vagina, causes much local suffering, or much sympathetic disturbance. A small globular pessary introduced in the *cul de sac* behind the womb, suffices to keep the organ off the pelvic floor, and often affords the patient a degree of comfort equally grateful and unexpected, and removes symptoms such as we could scarcely persuade ourselves that so very slight a degree of misplacement of the womb should have produced. The large globular pessary is also very useful in cases of considerable and long-standing prolapsus of the uterus, in which the organ is close to the external parts, or even protrudes beyond them, and the whole of the vaginal wall is in a state of extreme relaxation. In some of these cases, indeed, as well as in others where the perineum has been extensively torn, it may be necessary to retain the pessary by means of an external bandage with a pad pressing on the perineum. In every instance of considerable prolapsus of the vagina, and in all cases where

the rectum or bladder is prolapsed, an oval pessary is absolutely needed to prevent the increase of the ailment, and to bring about its cure. The globular pessary, however, is not free from some disadvantages. Unless it be very small, or unless the patient learn to introduce and remove it for herself, a matter, indeed, seldom of much difficulty, it not only interferes with sexual intercourse, but also with such an efficient use of vaginal injections as is necessary for purposes of cleanliness. It is partly with a view to obviate the difficulties which a person sometimes experiences in the introduction and withdrawal of the pessary, that air pessaries have of late been invented, composed of bags of vulcanized indian-rubber, with a tube attached to them; through which, having been introduced in the flaccid state, they may be distended with air by means of a syringe. They are expensive, and apt to get out of order, but I know of no other drawback from their utility. In some instances there is a very considerable degree of tenderness of the uterus and vagina, so that an ordinary wooden pessary occasions much pain, and when this is the case the indian-rubber air pessary will be found extremely serviceable. Besides the more costly form of it, which is inflated by means of the syringe, there is a less expensive kind which resembles an ordinary pessary, except that it is distended with air, instead of being stuffed with horse-hair or any other material.

I ought, perhaps, to say a word or two about the use of pessaries made of sponge, and which, though less employed than they once were, are not without their application in some instances. The employment of globular pieces of sponge enveloped in oiled silk to render them impervious to the vaginal secretions, has now fallen into disuse, owing to the superior advantages of indian-rubber pessaries. When used now, therefore, the sponge is introduced either without any covering, or enclosed in a piece of linen. The advantages of the sponge pessary consist in the facility of its introduction, which the patient can always manage for herself, and in the circumstance that it expands so as effectually to keep the uterus *in situ*, and that astringent vaginal injections may be used without its removal.

The objections to it are, that its rough surface is always apt to irritate the vaginal walls, while by imbibing the discharges, it grows rapidly very offensive and proportionately more irritating. On these accounts, therefore, it is never to be employed among the poor, whose circumstances are likely to interfere with the most scrupulous cleanliness, nor in any case where there is difficulty in retaining the uterus in its place; while wherever it is used, the sponge ought to be withdrawn every twelve hours and another substituted for it, and no sponge should be reintroduced till after it has soaked for twelve hours in water. The only cases then in which sponge is advisable as a pessary, are cases of the minor degrees of prolapse, where we are fearful lest the evil should be increased by the patient's ordinary pursuits and exercise, while the use of a pessary is a precautionary measure, which there is good reason to expect that we may in a short time be able to dispense with altogether.

Another kind of pessary not so generally applicable as that of a globular or oval form, but yet having advantages which render it very useful in some cases, is the disk pessary. This, as its name implies, is a flat disk of wood, or sometimes some light material, such as hair or wool covered with indian-rubber, or even an indian-rubber cushion inflated with air, which being introduced into the vagina, is placed transversely across between the spines of the ischia, so as to form an artificial floor to the pelvis, and thus keep the uterus more nearly in its natural situation. These pessaries are all perforated with a central opening, which is not merely useful in facilitating their removal, but also allows the ready escape of the menstrual fluid, and even admits the possibility of conception taking place, while they are still worn by the patient. The central aperture, however, has sometimes been the occasion of considerable discomfort to the patient, owing to the cervix uteri passing through it and becoming swollen, and partially strangulated by its edges. This inconvenience is easily avoided by the precaution of having the central aperture made either too small for the cervix to pass through it, or too large for the possibility of its strangulation

occurring ; and, as a general rule, the former mode of construction is preferable to the latter. A less remediable objection to this kind of pessary is furnished by its extreme liability to become displaced, owing to the circumstance that it is in contact with only a comparatively narrow band of vaginal wall, instead of being embraced, as the globular pessary is, by a large extent of surface ; while, though a woman possessed of very slight dexterity, may learn to introduce and remove the globular pessary for herself, she must always be dependent on a medical man for the proper adjustment of a disk-shaped pessary.

There are many other varieties of pessary, differing some in their form, some in their material, concerning which a visit to an instrument maker's will give you all needful information. To one only of these I will call your attention, namely, to a pessary invented by Professor Kilian of Bonn, which is composed of two halves connected by a spring. Being introduced closed into the vagina, the two halves are kept asunder by the elasticity of the spring ; and thus the upper part of the vaginal wall being somewhat forcibly put on the stretch, the uterus is prevented from sinking down into the pelvis in the manner in which it was wont to do while the vagina was in a flaccid state. While this instrument, however, is clearly inadequate in all cases where the prolapsus is very considerable, or the flaccidity of the vagina extreme, an objection inseparable from its use is that if the elasticity of the instrument is but slight, it is very likely to fall out of the vagina ; if considerable, its pressure is apt to give very considerable pain to the patient.

But there is another large class of pessaries in which the instrument is retained in its position by some support external to the patient, not by the mere counterpressure of the vaginal walls and pelvic floor. The principle of all such instruments consists in the employment of some kind of belt surrounding the hips, to which either a stem is attached, bearing the uterine support, or else straps are connected with it which serve to hold the internal support in its proper position. The great practical drawback from their employment is this, that the belt or spring surrounding the

pelvis is unavoidably liable to slight changes of position, by which the vaginal stem is sometimes brought to press painfully on the orifice of that canal, or the uterine support becomes misplaced, so as to allow of the descent of the womb taking place by its side. This circumstance, together with the much higher price of the instrument, leads to its being comparatively seldom employed, though you may meet with cases, those especially in which the perineum has been extensively torn, in which one or other modification of this apparatus may be of service.

One source of comfort to the patient, from the employment of some of these external supports, is derived from the counter-pressure on the pelvis which the belt exercises, and which relieves very many of the painful sensations experienced in cases of uterine prolapsus. Two bandages which seem to me extremely well adapted for this purpose, are Hull's utero-abdominal supporter, and a bandage known by instrument makers as Dr. Ashburner's bandage. Each of these tightly embraces the hips, while the former is furnished with a large padded metallic plate fitting over the pubes, and the latter with a similar one adapted to the upper part of the sacrum. The chief utility of these metallic plates is that by their firm and yet gentle counterpressure they relieve the sympathetic pains referred to the back in one case, or the dragging and distress in the region of the ovaries in another. To both of them a strap passing between the legs, with a perineal pad is adapted, and though it can be dispensed with at pleasure, will be found of great service in all cases of considerable relaxation of the vagina, with disposition to actual procidentia, when used either alone, or in combination with some form of internal support. The strap and perineal pad have the disadvantage of heating the parts, and thus of keeping up leucorrhœal discharge; but without them the instrument cannot be so well adjusted. Of the two, that of Dr. Ashburner, with its sacral pad, has seemed to be particularly useful, greatly relieving the back-ache, and being found indeed by some persons almost indispensable to their comfort in walking or making any kind of exertion.

It can scarcely be necessary to say much with reference to the manner of introducing pessaries, or the precautions to be observed by those who wear them. Even in cases that most require their employment, it is always presupposed that they are not used so long as any considerable tenderness of the parts exists, or as there are any remains of inflammation or of considerable congestion. These conditions being removed, the patient lying on her left side, the uterus is carried as nearly as possible into its natural position, and the pessary covered with oil, or some unguent, is introduced, not without attention to the direction of the pelvic axes, and placed either behind the cervix uteri, or simply in the upper part of the vagina, if the relaxation of the vaginal walls is very considerable, and the prolapsus has passed the first degree. Whenever the relaxation of the parts is great, it will be essential to choose at first a pessary so large as not to be introduced through the orifice of the vulva without some little difficulty, for the vagina is always more capacious near to its upper part than close to its orifice ; and besides, if the introduction of the instrument were very easy, it would be almost sure to become speedily displaced. In the greater degrees of prolapsus, and when the perineum is torn, an external bandage with a perineal pad is required to keep the instrument in its place.

When the disk pessary is employed, the instrument is introduced edgewise, and is carried up in the vagina as far as possible in that position. It is then fixed by turning it round so as to bring it to lie transversely between the ischiatic spines, when it forms a sort of artificial pelvic floor, on which the uterus rests. Whichever kind of pessary is used, but especially when the disk pessary is employed, we should not leave our patient after its introduction until she has walked two or three times across the room, and thus ascertained that the instrument still remains in its proper position.

No pessary should be allowed to remain for many weeks in the vagina, whatever may be the precautions used by frequent employment of vaginal injections to prevent the deposit of the secretions upon it. One of the great advantages of the globular

or cylindrical pessary consists in the possibility of its being removed by the patient herself every night, and replaced before she rises in the morning, by which means not only can the instrument itself be kept scrupulously clean, but the vagina can be washed out by the copious use of water, or of some astringent lotion twice in the twenty-four hours. Cases of most serious mischief, arising from the neglect of this precaution, are on record, in which inflammation and ulceration of the vagina have been produced, or the pessary has even made its way into the bladder, thus entailing on the patient all the miseries of vesicovaginal fistula. But another reason for the frequent removal of a pessary is, that in many cases we employ it purely as a temporary expedient, as a means of keeping the womb in its place, while the vagina and the duplicatures of peritoneum are acquiring that power which may enable them permanently to retain it there. We hope that after a time the pessary may be altogether dispensed with, and as a preliminary step towards this, we change the pessary occasionally, and substitute a smaller instrument for that which was previously worn. It is indeed comparatively seldom expedient to do away with the use of the pessary all at once; but it is in general more prudent to employ one or more instruments of smaller size before discarding their use altogether.

In cases of prolapsus of the rectum, it is important to give the patient special caution as to the necessity of attending to the state of her bowels, and as to the probability that a few weeks of neglect in that respect would reproduce all her former symptoms. When the bladder has been misplaced, something may be done to cure the slighter degrees of the accident, or after the removal of the pessary to prevent its return, by the patient pressing with her fingers against the anterior vaginal wall whenever she passes water, so as to ensure on each occasion the complete emptying of the bladder.

In all cases of procidentia of the uterus, as well as of external prolapse of the vagina, the first point to attend to is to return the parts within the pelvic cavity, and to keep them there by the

employment, if necessary, of Ashburner's or of some other well-adjusted bandage with a perineal pad. In some instances, when the procidentia has been of very long standing, this is all that can for a time be attempted, since the amount of hypertrophy of the womb and of the adjacent parts is not infrequently so considerable as to leave little room for the employment of a pessary. It is remarkable, however, with what rapidity such hypertrophy diminishes if the patient is kept for two or three weeks perfectly quiet in the recumbent posture, while care is taken that the prolapsus does not become again external. The presence even of very considerable abrasion about the os uteri does not in any measure contra-indicate the immediate return of the organ, nor do in general the large and indolent ulcerations which form upon the surface of the inverted vagina. The healing of such sores, though always tardy, yet usually goes on much more rapidly within the body than external to it, while, if cicatrization do not advance satisfactorily under the use of simple vaginal injections, such as the lead wash, or the *lotio nigra*, the patient can be directed to protrude the uterus externally by occasional bearing down efforts, in order to enable us to touch the edges or surface of any ulcer that may require it with the nitrate of silver.

To this rule, however, there are occasional exceptions. Sometimes the exposed surface has become extensively abraded, and is very painful, or the ulcerations upon it are large, numerous, and unhealthy. In such circumstances the endeavour to replace the uterus would be very painful, while the ulcerations may require more direct treatment than would be practicable if the organ were returned within the pelvic cavity. When this is the case I am accustomed to keep the patient for a few days strictly in the recumbent posture, with the hips raised, and the uterus itself supported on a pillow, and enveloped either in simple water dressing or in a weak lead lotion, or if the abrasion of its surface be very extensive, and the discharge from it very profuse, in cloths soaked in a lotion composed of two scruples of the oxide of zinc, suspended by means of two drachms of mucilage, in six drachms of water. If the sores are very indolent they

may be dressed with an ointment of two drachms of Peruvian balsam to an ounce of spermaceti ointment, while their edges may require daily touching with the solid nitrate of silver. These measures, however, are to be continued only so long as the state of the procident parts absolutely requires it, for the sooner they can be replaced the better it is in all respects. Two other conditions require caution in the endeavour to replace the womb, or delay in attempting it. When the uterus has long been external, the intestines, as already explained, fall down out of their proper situation into the pelvic cavity. They may grow so habituated to their new position that considerable discomfort may be experienced by the patient when the womb is replaced. In these circumstances it will be advisable to return the organ for a short period only every day, so as by degrees to accustom the parts to the disturbance of what has now become by the lapse of time almost their natural position. The discomfort, however, that the patient experiences, may be further due to the circumstance that adhesion has taken place between the intestines themselves, or between them and the margins of the sac of the prolapsus, thus offering a positive mechanical impediment to the replacement of the womb, and calling for much care on our part, since not discomfort only, but dangerous peritonitis, may result from too forcible efforts to return the womb, or when replaced to keep it constantly within the pelvis. In all cases, too, of very large prolapsus, in which the intestines have descended into the sac, much caution is necessary in any attempt at replacing the womb. If there be much tenderness of the mass, it may be expedient to apply leeches to it, and to keep fomentations or water dressing upon it for many days. But even in the absence of any such symptom it is yet expedient, unless the mass is returned with great facility, to content ourselves for a time with raising the uterus by means of a pad, and applying a T bandage to prevent its further descent; for if by gentle means we can gradually diminish the prolapsus, we may hope in the course of time safely to remove it altogether. By an opposite course of proceeding, so much violence will almost invariably be done

to the intestines as to excite their inflammation; and I have seen death on one occasion result from this want of precaution, while in another instance, though no excessive violence was used in replacing the organ, peritonitis supervened, from which, however, the patient happily recovered.

The various contrivances for the relief of prolapsus of the uterus or vagina which we have hitherto examined, are confessedly merely palliative measures; bringing about a cure, indeed, in many instances, but doing so indirectly by preventing any increase of the displacements, and thus giving time and opportunity for nature gradually to remove them. In the slighter degrees, and in comparatively recent cases of prolapsus, these means seldom fail to accomplish much good; but there is an uncertainty about their results when the accident is of long standing, or very considerable, which has led not unnaturally to the endeavour more speedily and more surely to accomplish a cure.

Numerous operations have therefore been devised, having in view either the diminution of the orifice of the vulva, and the consequent prevention of external prolapsus, or the contraction of the vagina itself, and thereby the removal of one of the chief causes on which the prolapsus depends. There can, probably, be no difference of opinion with reference to the propriety of performing an operation in some of these cases. In those, for instance, where extensive laceration of the perineum has been followed by prolapsus of the vagina or rectum, and by consequent descent of the uterus, it is obvious that all mechanical contrivances for keeping the womb in place, will accomplish but little in comparison with what we may hope to do by restoring the perineum, giving to the vagina once more its proper support, and bringing the parts again into their natural condition. Between this, however, and the artificial contraction of the orifice of the vulva, as practised by the late Dr. Fricke, of Hamburg (whose operation in a modified form is adopted by Mr. Brown, of London), there is a very wide difference. The restoration of the natural perineum gives back to the pelvic organs the support of

which accident had deprived them, and is thus essentially a curative measure ; the partial obliteration of the vulva does no more than mechanically to close the opening through which the prolapsed organs had escaped from the pelvic cavity ; while it leaves all the other evils of the accident unmitigated, and even less amenable to palliative measures, and to such aid as mechanical contrivance can afford, than they were before. It must also not be forgotten that these comparatively trivial operations on the external sexual organs of women are not absolutely free from risk, but that while they very often fail of success, they have been known to give rise, in a few instances, to dangerous, or even fatal, peritoneal inflammation.

A different kind of operation, however, has sometimes been practised, either in addition to that for narrowing the vulva, or independently of it, and which consists in the endeavour to contract the vaginal canal, either by the removal of strips of its mucous membrane, or by the employment of the actual cautery, or of strong caustics, so as to produce cicatrices in its walls, and consequent shrinking of its calibre, or by the insertion of sutures in its tissue in a peculiar manner, with the view of obtaining the same result. The first of the proceedings, first suggested by a French surgeon, M. Gérardin, but actually performed thirteen years afterwards by Dr. Marshall Hall, and modified by Professor Dieffenbach, of Berlin, has been practised more frequently than the other operations, and with considerable temporary success. The actual cautery employed by M. Laugier, and afterwards by Dr. Kennedy, of Dublin, and the use of the strong nitric acid resorted to by Mr. Benjamin Phillips, have proved less successful ; while Bellini's operation by means of the suture is difficult, complicated, and has therefore been abandoned.

It is a drawback from almost all autoplastic operations, that they require for their success a peculiar tact and dexterity, such as few possess except those who devote themselves especially to their performance ; and the different results obtained by other surgeons from M. Jobert's operations for the cure of vesicovaginal fistulæ, may be adduced as no unfair illustration of this

fact. But a more serious objection to the surgical proceedings for the alleged cure of these affections, is the want of permanence in the result, and the rather, since failure would seem to be the rule, success the rare exception.* I think, too, that if we consider the circumstances in which prolapsus either of the uterus, rectum, or bladder takes place, we can scarcely expect that the result of the operation should be other than temporary; that the cicatrix tissues should yield to the pressure from above, and that all their other causes remaining unremoved, misplacement of the organs should in most instances recur.

The annals of medicine contain the history of some few extraordinary cases in which the uterus, having long been procident, being quite irreducible, and having been attacked by inflammation which terminated in gangrene, has been removed with no ill effect by means of the ligature and knife. I have no personal experience of such cases, though a patient was once sent to me at St. Bartholomew's Hospital to have the procident uterus extirpated. The procidentia, however, was not irreducible; the uterus was not the seat of any dangerous inflammation, and the woman within the previous year had given birth to a child. I need not say that the operation was not performed, but the womb, being replaced within the pelvis, was retained there by means of an Ashburner's bandage, and the patient was sent back to the country in a state of comparative comfort.

I do not know, however, but that instances may occur justifying this proceeding, and further would remind you that the

* In a note at vol. i. p. 205, of the fourth edition of Kiwisch's work on *Diseases of Women*, the editor, Professor Scanzoni, makes some remarks on this subject, based on his own experience at Prague, which amply bear out the statements in the text. He says that of five cases in which the orifice of the vulva was contracted by operation, all were unsuccessful. A typographical error renders it impossible to state exactly the results of eleven instances in which it was endeavoured to obtain contraction of the vaginal canal, but apparently though either four or five were benefited by it, two of that number were, three months after the operation, in just the same condition as before its performance. This impression is strengthened by the remarks of Kilian on the subject of these operations, in his elaborate *Operationslehre*, &c., 2nd ed. vol. iii. pp. 96—102. Mr. Brown's ingenious operation for prolapsus of the bladder, seems likely to prove one of the most successful of these proceedings. See his work *On some Diseases of Women*, &c., 8vo, 1854, chapter ii.

womb, when long misplaced, loses much of that sensibility which characterizes it when in its natural position. The inverted womb has on many occasions been safely removed by ligature, and one of the few instances of successful extirpation of the cancerous uterus was that recorded by the younger Langenbeck, in which his father performed the operation on a womb that for years had been procident beyond the external parts.*

There would be two great risks to be avoided in such a proceeding: the one would be that of opening the peritoneum, the other that of wounding the bladder, which viscus in almost all cases of considerable or long-standing prolapse, descends far down in the front of the tumour, and without much care would be very likely to be injured.

* *De totius uteri extirpatione*, auctore M. Langenbeck, 4to, Göttingæ, 1842.

LECTURE XI.

MISPLACEMENTS OF THE UTERUS.

VERSIONS AND FLEXIONS OF THE UTERUS.

Retroversion of the Womb ; knowledge of its existence in unimpregnated state comparatively recent. Its causes, and mode of its occurrence. Illustrative cases.

Anteversion ; its probable rarity ; often confounded with ante flexion.

FLEXIONS OF UTERUS—probably more frequent than misplacements of whole organ—always take place at one point, and why ; comparative frequency of ante, and retroflexion. Absence of disposition to spontaneous cure ; existence of adhesions and of atrophy of uterine wall. Influence of flexions on uterus in other respects, hypertrophy of womb ; constriction of internal os, &c.

Obliquity from congenital malformation.

WHEN speaking about prolapsus uteri, I explained to you how it occurs that descent of the womb is always associated with a disposition to retroversion of the organ ; or in other words to a falling back of its fundus into the hollow of the sacrum. Such minor degrees of retroversion, however, are of comparatively trivial importance, and whatever symptoms they may occasion are entirely lost in the general consequences of the downward displacement of the womb.

Cases, however, especially of late years, have engaged the attention of practitioners, in which, though the womb may be somewhat lower than natural, yet it is not only, nor even principally, to this displacement that the patient's symptoms are due ; but rather to a falling of the fundus uteri downwards and backwards into the hollow of the sacrum, accompanied with a corresponding elevation of its cervix, which is directed upwards and forwards against the symphysis. To Dr. William Hunter we owe, if not the first mention, at least the first clear description of this *retroversion of the womb* as an accident liable to happen

in the early months of pregnancy; and since his time no treatise on midwifery has failed to mention its occurrence, and to delineate its symptoms in colours even darker than are always needful.

But though it would seem natural to anticipate that this accident should not always be limited to the pregnant state, but might also sometimes happen in any other circumstances which rendered the womb heavier than natural, and its supports more lax, yet it was long before this was recognised as a general fact, and the few instances of the displacement which were from time to time recorded by continental writers, were regarded as rare and exceptional occurrences. The minute detail of four cases of this misplacement of the unimpregnated womb, by Professor Oslander, of Göttingen, in the year 1808, then in the zenith of his reputation, did much towards directing attention to the subject. It was not, however, until some years later that the publication of the essays of Professor Schweighäuser,* of Strasburgh, and of Professor Schmitt, of Vienna,† fully established the frequency of the accident, and furnished a description of its symptoms so minutely accurate as to have left little room for the additions of subsequent observers.

The researches of these German writers attracted but little attention out of their own country; and retroversion of the womb, as well as the opposite condition of its anteversion, were regarded by medical writers, both in France‡ and England, as ailments extremely unusual in the unimpregnated condition of the womb. In the year 1848, however, a paper was published in the *Dublin Journal of Medical Sciences*, by Professor Simpson of Edinburgh, on retroversion and other misplacements of

* Schweighäuser, *Aufsätze über einige Gegenstände der Geburtshülfe*, 8vo, Nürnberg, 1817, cap. xxviii. p. 251; and *Das Gebären nach der beobachteten Natur*, Strassburg, 1825, 8vo, p. 234.

† *Bemerkungen über Zurückbeugung der Gebärmutter bei Nichtschwangeren*, 8vo, Wien, 1820.

‡ From this statement, however, it is only just to except the name of M. Velpeau, who was led by his own observation long since to appreciate the frequency and importance of flexions of the uterus, and to devise means for their cure. See p. 14 of a small tract of his, *Maladies de l'Uterus*, 8vo, Paris, 1854.

the unimpregnated womb; accidents to which he had already drawn attention five years before at a meeting of the Medico-Chirurgical Society of Edinburgh; and since that time the danger has been lest the importance and frequency of these conditions should be overrated, rather than lest they should be underestimated.

One of the results of close attention being directed to the situation of the womb in the pelvic cavity, has been to show that the organ is liable in this respect to very great varieties; that not only may its fundus fall backwards into the hollow of the sacrum, or forwards against the symphysis pubis, but that it may also incline towards either side; and that moreover its body is liable to be bent upon the cervix, constituting a new class of misplacements called flexions. There seems also to be reason for believing that the different varieties of flexions of the womb, as its *retroflexion* and *anteflexion*, are of more frequent occurrence than the corresponding alterations in position of the whole of the organ which are known as *retroversion* and *anteversion*.

Fewer difficulties present themselves in the way of understanding the mode of occurrence of *retroversion* than of the other above-mentioned misplacements of the womb. It has already been seen that the tendency of the womb when at all enlarged is not only to sink below its natural position in the pelvic cavity, but at the same time to fall with its fundus backwards towards the hollow of the sacrum, in consequence of the utero-sacral ligaments confining it more closely to the posterior part of the pelvis than do the utero-vesical ligaments to the anterior pelvic wall. Moreover, enlargement of the womb, whether from the presence of fibrous tumour, or dependent on simple congestion and consequent hypertrophy of the organ, or resulting from its imperfect involution after delivery or miscarriage, is almost always much more considerable at its posterior than at its anterior wall, and the womb in consequence naturally falls towards that side which is the heavier. The ordinary distension of the bladder, too, necessarily tends to throw the uterus into the posterior half of the pelvis; and if the utero-

vesical ligaments be at all yielding, as they must be in cases where some degree of prolapsus exists, the same cause must also dispose the fundus of the organ to fall backwards; while the inclination to the malposition will be increased by a loaded state of the bowels such as exists habitually in many persons.

When favouring causes, such as have been just referred to, coincide, retroversion of the womb may take place either gradually, or as the result of some sudden accident which violently increases the uterine misplacement, and throws the fundus of the organ downwards and backwards into the hollow of the sacrum. It is thus suddenly that in the majority of instances retroversion of the pregnant womb takes place; an accident, the comparative rarity of which is, I apprehend, to be accounted for mainly by the circumstance that not only does its physiological enlargement equally extend to the whole of the organ, but also that the size and strength of its ligaments increase with the added weight which they have to bear. But, while owing to this wise provision, the pregnant womb rises gradually and safely out of the pelvic cavity, the hypertrophied organ, or that whose involution is imperfect, or in whose substance tumours are developed, being destitute of such duly increased supports, sinks down far lower than natural in the pelvis.

The sudden effort and consequent violent misplacement which we generally find to constitute the history of retroversion of the enlarged and pregnant womb, are sometimes, however, equally marked in the case of the non-gravid uterus, showing that the mode of occurrence of the accident is identical in both instances. Thus, a woman aged thirty, whose second and last labour had taken place sixteen months before, while reaching over the fire to remove a heavy teakettle, was suddenly seized with violent pain, referred to the back and the umbilicus, and became for a time unable to pass her urine, and though she afterwards voided it, yet it was with pain and difficulty, and defæcation also was attended by pain. On examination per vaginam the finger came in contact with a firm, but slightly elastic, globular tumour, which felt about half the size of an orange, and occupied the pos-

terior half of the pelvis, having driven before it the posterior vaginal wall, while the rectum could be traced passing behind it. The situation of this tumour was not exactly in the mesial line, but it occupied rather more of the right than of the left half of the pelvis, while the os uteri was situated high up; immediately behind the symphysis pubis, but a little to the left of the mesial line. I may remark in passing, that to this slight obliquity of the retroverted uterus, it is due that the urethra and neck of the bladder not infrequently escape that pressure which would otherwise be unavoidable; and thus it happens that difficulty of micturition is, in many instances even of retroversion during pregnancy, by no means so prominent a symptom as the statements in most systematic treatises on the diseases of women might lead one to expect. There was, besides; in the left iliac region, a firm slightly moveable tumour, whose surface was a little irregular as if nodulated, and pressure upon it was communicated to the tumour in the pelvis. Inquiry ascertaining that the patient's bowels had long been in a constipated condition, it was assumed that while the sudden exertion had retroverted the uterus, the accumulation of fæces in the sigmoid flexure of the colon and in the upper part of the rectum had prevented its spontaneous replacement. Enemata and purgatives were employed, and in the course of seven days the womb, which was not much larger than natural, had completely regained its proper position, while a vague sense of some swelling in the posterior part of the pelvis was ascertained to be due merely to the existence of very great hypertrophy of the walls of the rectum, a condition which is by no means uncommon in cases of long-standing habitual constipation.

It is not thus suddenly, however, that retroversion of the unimpregnated uterus usually occurs. In the majority of instances the accident may be traced back to labour, menstruation, or miscarriage, to some condition in short which combines considerable enlargement of the womb with weakening of its supports. A patient was received into St. Bartholomew's Hospital, on account of what was alleged to be a tumour in her womb, and suffering

from frequent hæmorrhage, from pain in the sacrum and hypogastrium, and from painful and difficult defæcation. All these symptoms dated from a miscarriage at the third month, which had occurred six weeks before. The uterus was completely retroverted, the os being directed forwards and somewhat upwards, while an elastic, globular, slightly tender tumour occupied the hollow of the sacrum. The uterine sound entered for five inches and three-quarters, with its concavity directed backwards, and on turning the instrument round, the tumour completely disappeared. Rest was followed by cessation of the hæmorrhage, the use of the cold douche led to some diminution in the size of the uterus, though it was still as much retroverted as ever, when the outbreak of small-pox in the ward compelled the patient's discharge from the hospital in less than three weeks after her admission.

Just two years later, the patient came once more under my notice. She had in the interval been pregnant several times, but had on each occasion miscarried early, while, when not pregnant, she had suffered much from menorrhagia. The uterus was no longer so enlarged as before, though of greater size than natural, but its misplacement was just as considerable; still, however, admitting of momentary removal by means of the sound, but almost immediately falling back into its former position. If this person had not been exposed to the risks of becoming pregnant, there can be no doubt but that the involution of her womb would have taken place much more completely; though even then the misplacement would almost certainly have continued unrelieved, and accident might then have discovered a small and otherwise healthy uterus completely retroverted, with no other clue to the cause of this occurrence than would have been furnished by the history of a miscarriage, succeeded by long-continued hæmorrhage some years before.

The state of the womb during menstruation, is similar to its condition after miscarriage, and favours in the same manner, though of course in a less degree, the descent of the organ or its retroversion, while in every form of misplacement of the uterus

the tendency of things is to a deterioration rather than to an improvement. The accumulation of urine in the bladder, the distension of the rectum with fæces, have a disposition to aggravate the misplacement, while the stretched ligaments and the lax vagina have no power of spontaneously recovering their tone, and of thereby favouring the replacement of the womb. With the return of each menstrual period, too, the uterus for the time grows heavier, and subsides further and still further back in the pelvis, till at length its retroversion becomes complete. Nor must it be forgotten that in some at least of the instances of this and of kindred misplacements, any permanent improvement is effectually prevented by the formation of adhesions between the fundus of the uterus and the surface of the adjacent intestines. Such attacks of circumscribed peritonitis as to produce these consequences were first noticed by Madame Boivin* as a cause of abortion, and she appears indeed to have exaggerated both their frequency and their importance. They are, nevertheless, of considerable moment, and none the less for the circumstance that they are by no means constantly accompanied by symptoms so severe as to force themselves on the patient's attention. Their occurrence, and the consequences which they leave behind, sufficiently account for the immobility of the retroverted uterus in some instances, for its difficult replacement and immediate resumption of its malposition in others.

A condition just the opposite of retroversion is spoken of by systematic writers, in which the uterus becomes *anteverted*; the fundus being directed forwards against the symphysis pubis, and its orifice backwards against the hollow of the sacrum. Now it is, as has already been remarked by the late Professor Kiwisch,† almost impossible to understand how, in an otherwise natural condition of the womb, such a misplacement should occur. The very form of the pelvis, while it favours the production of retroversion, is opposed to any such misplacement as the anteversion

* *Recherches sur une des causes les plus fréquentes, et la moins connue de l'Avortement*, 8vo, Paris, 1822.

† *Op. cit.*, vol. i. p. 235.

of the womb, while the accumulation of the urine in the bladder and of the fæces in the rectum, the former taking place from below upwards, the latter from above downwards, alike tend to prevent and remove it. There is, besides, no such pouch of peritoneum in front of the uterus as exists behind it, allowing space for the descent of the fundus uteri, and for its residence in this unnatural situation. The probabilities are that in most instances, where the uterus has been supposed to be anteverted, it was in reality anteflexed, or its fundus bent forwards on its cervix—a condition to which I shall have to advert presently—or else that the enlarged and indurated uterus was tied down in its position by old adhesions. Such I believe to have been the cause of the misplacement of the organ in a patient whom I saw four years after her delivery, which had been succeeded by phlegmasia dolens, and symptoms of uterine inflammation so severe as to have confined her to her bed for three months. Such possibly was the real history of a woman who had lived three years in sterile marriage, and who was attacked suddenly during menstruation, ten months before I saw her, by severe pains in the abdomen, followed by temporary cessation of the menses, by great pain in the hypogastrium, difficulty and pain in micturition, and symptoms like those of severe vaginitis, and who had ever after experienced attacks of violent paroxysmal uterine pain. Her uterus was both hard and enlarged, the fundus resting against the symphysis, and the os in the hollow of the sacrum. Sometimes, moreover, one meets with an increased degree of obliquity of the womb, though short of actual anteversion, which appears to be the almost mechanical result of sexual intercourse. When in connexion with this exaggerated obliquity of the womb, there has also existed some congestion of the organ, such as is not unusual, particularly in sterile women, the misplacement is then often associated with symptoms of uterine disorder, which probably are due less to it than to the gorged state of the blood-vessels with which it is associated.

It would not, however, be right to dismiss the subject without adding that one or two instances have come under my observa-

tion which do not seem to admit of this explanation, but in which the anteversion was apparently a primary occurrence. A remarkable case of this kind is related by the famous French accoucheur, Levret,* where the fundus of the anteverted womb was taken for a calculus in the bladder, and the patient died from the effects of lithotomy performed under this erroneous idea. In this instance it is expressly stated that slight engorgement of the anterior wall of the uterus and a somewhat unusual shortness of the round ligaments were the only appreciable causes of the malposition of the womb. A woman aged thirty, the mother of four children, the last of whom was born three years before she came under my observation, had ever since experienced some, though inconsiderable, abdominal pain. A few days before I saw her, however, while turning a mangle, she felt a sudden pain over the pubes, which extended over the whole pelvic region, and, on making an examination, the uterus was found remarkably anteverted, the os being in contact with the anterior wall of the sacrum, and the fundus resting against the inner surface of the symphysis. It seems difficult here to avoid connecting the symptoms suddenly supervening during exertion, with the misplacement of the womb. Still harder does it appear to me to be able to account for the malposition of the organ in an unmarried lady, aged thirty-four, whose menstruation had been habitually scanty, and who had suffered for eight months before she came under my care from hæmorrhoids, accompanied by profuse loss of blood. For four months she had also experienced abiding aching pain in the hypogastrium, with frequent and painful micturition. Her uterus was lying almost horizontally across the pelvis, its orifice being directed backwards, and to the left, and this to so great a degree as to render it almost impossible to touch the small circular os, while the fundus was situated in the same manner forwards and to the right.

Be the explanation of cases such as the above what it may,

* In the *Journal de Médecine et de Chirurgie*, &c., vol. lix., Janv. 1783, p. 35; whence the case is quoted *in extenso* in the *Bibliothèque du Médecin-Praticien*, vol. i. p. 322.

and I confess myself unable satisfactorily to solve all the difficulties which they present, there can be no doubt but that, in the greater number of cases of alleged version of the womb either forwards or backwards, the organ is really flexed, or bent upon itself; and further, that not infrequently the two conditions co-exist, the whole womb being thrown more forwards or more backwards than natural, while, in addition, the body of the organ is bent upon its cervix. As far as the symptoms are concerned to which they give rise, these varieties of misplacement present but little difference; but the distinction deserves to be borne in mind, since it throws light on the manner in which the accident is in many instances brought about.

The point of *flexion of the uterus*, whether it is bent forwards or backwards, appears in all instances to be the same—namely, the point of junction between the body and neck of the womb, or, in other words, a spot corresponding to the internal os uteri; so that the organ assumes a shape closely resembling that of a chemical retort. Various reasons have been assigned for the constancy with which the organ is found to bend at this one situation; and various theories, such as an assumed atrophy of one part of the uterine walls and engorgement of its fundus while the cervix remains unaltered, and other suggestions less plausible have been proposed in explanation of the fact. But these conditions are by no means invariably present even in cases of most marked flexion of the womb, and must therefore be rejected as inadequate to account for its taking place at the same situation in all cases. The only explanation that I know, against which no such objection can be raised, is that propounded by Professor Virchow, of Berlin,* and which is based on the anatomical relations of the organ. He points out the fact, that while the neck of the womb is firmly connected with the posterior and lower part of the bladder, its body is perfectly moveable; the point to which the peritoneum descends in the utero-vesical

* *Ueber die Knickungen der Gebärmutter*; in the *Verhandlungen der Gesellschaft für Geburtshülfe*, vol. iv. 1851, p. 80.

pouch corresponding exactly to the situation of the internal os uteri, and, consequently, to the spot where the fixed cervix passes over into the moveable body of the organ. The posterior surface of the cervix uteri, though somewhat strengthened by the cellular tissue which surrounds it, is by no means so firmly fastened as its anterior surface; while the pouch of peritoneum, descends much lower down behind it, and is even on a lower level than the summit of the roof of the vagina. If, now, any cause interfere with the ready mobility of the body of the womb, while the attachments of its cervix retain their firmness and resistance, a bending of the one part or of the other must of necessity take place; a bending which may occur either forwards or backwards, and thus constitute either ante-flexion or retroflexion. With reference to the production of the accident, it is probably a matter of indifference whether its cause be one that operates gradually and continuously, or suddenly and with great force—a violent exertion might therefore produce it; and just as much might the slow action of adhesions tethering the fundus of the womb either to the bladder or the rectum, and compelling the organ in the course of time to yield at its weakest point—namely, at that which corresponds to the junction of the body and neck of the organ.

This explanation will account equally for the occurrence of ante-flexion and of retroflexion. Of the two misplacements, the former is alleged by Rokitsansky, and by other morbid anatomists, to be the more frequent; but observations during life have seemed not altogether to substantiate the correctness of this statement. In my own notes, for instance, I find the particulars of twenty-six cases of retroversion, or retroflexion, and of only nine of ante-version, or ante-flexion; but these results are at variance with those of some most trustworthy observers. Thus, Valleix, in his valuable lectures on this subject,* gives thirty-five deviations of the uterus forwards, and thirty-three backwards; and Dr. Mayer,†

* *Des Déviations Utérines*, 8vo, Paris, 1852, see p. 27.

† As stated by Dr. Rockwitz, in *Verhandl. der Gesellschaft f. Geburtsh.*, vol. v. 1852, see p. 85.

of Berlin, met with sixty-three cases of the former, and sixty-four of the latter.

The older opinions on this subject, indeed, are in conformity with the conclusions which I have arrived at; but nevertheless I more than suspect their accuracy. Ante flexion of the uterus is, I have no doubt, frequently overlooked, since not only does the finger come less readily into contact with the parts in the anterior than with those in the posterior half of the pelvis: but further, unless the bladder be completely empty, the tumour of the ante flexed womb is scarcely perceptible; while, lastly, the pouch formed by the peritoneum, between the uterus and rectum, is so much deeper than that between the uterus and bladder as to allow of a more extreme degree of bending of the organ backwards than can take place in the opposite direction.

The explanation which has been proposed of the invariable occurrence of flexion of the uterus at the same point, suggests the reason why the ailment has no tendency, or scarcely any tendency to spontaneous cure, and explains why the misplaced womb remains misplaced for years. Two conditions, moreover, tend to give to the misplacement a permanent character, of which one is the presence of adhesions binding down the fundus of the uterus, either to the rectum posteriorly, or to the bladder in front; the other is the wasting of that wall of the uterus towards which the flexion has taken place, and which must necessarily render the organ incapable of retaining its natural position, even though it were possible to replace it completely. Of these two conditions the former is, I believe, the more frequent, and therefore the more important. Such adhesions are expressly mentioned in many of the cases in which, on examination after death, flexions of the womb have been discovered, and I can speak to the extreme frequency of adhesions, false membranes, or other indications of by-gone inflammation about the womb or its appendages, since I met with them in twenty-two out of sixty-six cases, in which I examined the uteri of women who had died of some other than uterine disease. There appears to be some uncertainty as to the date of the occurrence of

atrophy of the uterine wall, and also as to the degree in which it takes place. I found no trace of it in a case where the uterus was greatly antelected, and where the existence of marked uterine symptoms for many years rendered it probable that the condition was of long standing; and it is expressly stated by Dr. Rockwitz* not to have been present in the case of a woman whose uterus had been completely retroflected for a year by the presence of an ovarian tumour. On the other hand, Virchow describes the gradual wasting of the muscular substance at the point of flexion till nothing is left but a small quantity of flaccid, slightly fibrous, cellular tissue; and in a very useful essay on the subject, Dr. Sommer† relates some post-mortem examinations in which this atrophy of the uterine wall was very remarkable.

The effect of such a change in the uterine wall is twofold. On the one hand it weakens the tissue at one point, and thus incapacitates the organ for maintaining its proper position; on the other it shortens the wall towards which the flexion exists, and thereby ensures still more effectually the permanence of the malposition; and no one who is familiar with uterine ailments, and has felt the bent uterus resume its malposition immediately on the removal of the sound by which it had just been rectified, but must believe that such wasting of one uterine wall must exist in a very large number of instances.

A frequent, though by no means an invariable result of long standing flexion of the womb, and one which must be borne in mind as explaining some of the symptoms to which it occasionally gives rise, is a contraction of the internal orifice of the womb. This constriction, too, is at any rate in Virchow's opinion, not a merely mechanical approximation of the two sides of the canal by the bending of the organ, but is in many instances due to an organic narrowing of the passage produced by the constant irritation of the mucous membrane at this spot and its consequent thickening. Any positive obliteration of the internal os, however, which Virchow has sometimes met with in aged persons, is not

* *Loc. cit.*, p. 82.

† *Zur Lehre der Infractioren und Flexionen der Gebärmutter*, 8vo, Giessen, 1850.

merely a very rare occurrence, but is probably due in large measure to the natural tendency to closure of the internal os which exists in old age, and which the flexion of the uterus, though it may have increased, has not originated.

One or two other consequences of flexion of the womb deserve mention, though I believe that the degree to which they exist admits of very wide variation. The body and fundus of the womb are very apt, as the result of their altered position, to become the seat of congestion; a congestion that may be very intense,* and with the existence of which it is reasonable to associate the disposition to menorrhagia, which is so prominent a feature in many cases of this kind. Moreover, a part which is the frequent seat of congestion tends to enlarge, and hence the misplaced body and fundus of the womb often become hypertrophied, while the difficulty of escape of the secretions, when the angle of flexion is very acute, tends to increase the dimensions of the uterine cavity, a result of the occurrence of which the uterine sound informs us in a very large number of instances.

The condition of the cervix uteri is seldom natural, but there is generally a profuse secretion from its glandular apparatus, while the edges of the os uteri are usually red, and their epithelium is often abraded, a condition dependent doubtless on the state of general irritation of the cervix. To the touch the margins of the os seldom present any marked deviation from a healthy condition, while the os itself (at least in retroflexion, concerning which my observations are more numerous than concerning ante flexion,) is in general open so as to admit the tip of the finger. The anterior lip too, in cases of retroflexion, is usually shorter than the posterior, an alteration of the natural relations probably due, as Sommer suggests, to merely mechanical causes, and to the dragging out of its place of the lip on that side which corresponds to the convexity of the flexed womb.

In the cases to which reference has hitherto been made, the uterine misplacement would seem to be an acquired condition,

* As in the drawing of the ante flexed uterus at figs. 5 and 6 of plate ix. of Boivin and Dugé's *Atlas*.

though one coming on at different periods of life, and under the influence of causes which, sometimes at least, are obscure. There are other instances, however, in which *obliquity of the uterus* forwards, backwards, or to either side is *the result of congenital malformation*, associated with marked difference in the length of the womb and broad ligaments on the two sides, or dependent on unequal development of the two halves of the womb itself. In one instance in which I found the womb, in an unmarried girl, aged eighteen, oblique in form, and inclined towards the right side, the left ligamentum ovarii was 1·2 inches in length, while that of the right side measured only ·6 of an inch; and in the body of another unmarried girl, aged nineteen, likewise free from all trace of uterine disease, the womb was unequal in size, its right corner being ·3 of an inch higher than the left. Professor Tiedemann,* who was the first to call special attention to this condition, has published in his treatise on the subject several drawings, which represent very extreme degrees of uterine obliquity and malformation. There is nothing to surprise us in the occasional want of symmetry of an organ formed as the uterus is, in great measure, by the coalescence of two lateral halves or cornua. At the same time it seems very doubtful whether such inequality of the womb gives rise to any symptom, or whether in the event of pregnancy and labour occurring it produces any of those formidable results which Deventer and other practitioners of midwifery a hundred and fifty years ago referred to obliquity of the uterus; opinions which even at the present day are not altogether exploded. I refer to these conditions now, chiefly for the purpose of impressing on you the by no means needless caution, that since uterine obliquity may depend on causes wholly beyond remedy, so prudence dictates that when it gives rise to no symptoms we should abstain from all endeavours at cure which, to say the least, are needless, which very likely may be fruitless, which possibly may prove very mischievous.

* *Von der Duverneyschen Drüsen des Weibes, und der schiefen Gestalt und Lage der Gebärmutter*, 4to, Heidelberg, 1840.

LECTURE XII.

MISPLACEMENTS OF THE UTERUS.

VERSIONS AND FLEXIONS OF THE UTERUS.

Symptoms. Conflicting opinions concerning them; how they may to a certain extent be reconciled. Alleged symptoms not always due to misplacements. Evidence of statistics; production of symptoms connected with other causes acting on the womb. Enumeration of symptoms, and separate examination of each.

Diagnosis. Use of the sound.

Treatment. Historical sketch of opinion and practice on the subject. The uterine supporter; reasons for rejecting mechanical contrivances, and for preferring palliative treatment. Plan of treatment described.

WE have hitherto been occupied with the examination of the nature of the various versions and flexions of the uterus, and have had occasion in the course of this inquiry to notice conflicting opinions and opposing statements which it was very difficult, which it was sometimes indeed quite impossible to reconcile. Such discrepancies become more numerous, and more frequently irreconcilable as we pass to the study of the symptoms which these misplacements produce, and to the consideration of the treatment which they require. The symptoms are by some described as being both numerous and characteristic, and the appropriate treatment is by them alleged to be both simple, safe, and successful; while others deny that the malpositions taken by themselves produce any symptoms, and assert that the proposed treatment, while attended by very considerable risk, is wholly inadequate to the removal of the evil which it is intended to cure. Each of these opinions, too, is maintained by men equal in the eminence of their position, in their practical experience, and their good faith.*

* The published report of the discussion at Paris on this subject, contained in the *Bulletin de l'Académie de Médecine* for 1853-54, vol. xix. pp. 778—976, is a most remarkable illustration of the extent to which, in an uncertain science, difference is possible.

The alleged results of these uterine misplacements may be briefly stated to consist in disorder of menstruation, which is usually both excessive and painful, in leucorrhœal discharge, in pain and difficulty both in defæcation and micturition, and in pain in the pelvis generally, though usually most severe in that part of the pelvis towards which the fundus uteri is turned or flexed, while sterility is a further consequence stated to be produced by flexions of the womb in a very large number of instances. In these symptoms it is obvious that there is much that of itself cannot be regarded as pathognomonic of one uterine affection rather than of another, since they constitute just that train of ailments which in varying combinations and with varying intensity we meet with in almost every disorder of the womb. To this, however, it would not be right to attach much importance, since the uterine ailments that manifest themselves by some one characteristic symptom, or by characteristic combinations of symptoms, are very few indeed. Just as sickness may depend on sympathethic disturbance of the stomach during pregnancy, or on irritability of the organ consequent on some exhausting disease, or on the presence of sarcinæ in its cavity, or on the development of cancer in its walls, so may the same symptoms depend in one case on trivial disorder of the womb, in another on its incurable disease. The symptoms are like the alarm-bell, which gives notice of a something wrong, and serves to awaken attention; it is not fair to expect that they should at once inform us not merely what part suffers, but what the exact cause is on which those sufferings depend.

Another circumstance, however, has been much insisted on as proof of the unreality of the alleged symptoms of these misplacements—namely, that in many instances, where accident has revealed their existence, the uterine functions were performed in all respects naturally and painlessly. But from this fact we must be careful not to draw too wide an inference, for even the early stages of uterine cancer pass not infrequently unrevealed by any symptoms of disorder of the womb; and fibrous tumours often attain a great development before their existence is

suspected, or a lull of their symptoms takes place so complete and of such long continuance, that careful examination alone convinces us of the persistence of the evil which had produced them. There is a French phrase which expresses excellently well the character of those in whom both these misplacements and other uterine ailments are generally attended by the most urgent symptoms: they are persons *qui s'écoutent vivre*,—who watch themselves live; and the ailments, of which another would be barely conscious, are to them sources of exquisite torture. The ailment may be a real one, and yet it may be the wiser and more hopeful course to try to remedy the state of constitution which exaggerates the patient's sufferings rather than to meddle with the local affection that excites their present manifestations.

But there are facts of a different kind which show that the importance of these ailments has probably been overrated; and they are furnished by cases in which the removal of the misplacement, though no other uterine ailment was discoverable, has not been followed by any mitigation of the patient's sufferings, as well as by others in which the symptoms once present have ceased, in spite of the persistence of the misplacement. A woman, aged twenty-two, had been married four years, during which period she miscarried four times; on the last occasion, at the sixth month, seven months before coming under my care. She suffered from the date of her last miscarriage from pain, leucorrhœa, and profuse menstruation, accompanied by discharge of coagula; and on examination her uterus was found retroflected, the fundus being directed not only backwards, but also to the left side. Twenty-seven months after her last abortion she became pregnant, but the misplacement continued during the early months of pregnancy, as was ascertained by examination. She gave birth to a live child at the full period of utero-gestation, and expressed herself as feeling afterwards perfectly well; but her womb was still retroflected, and I found it occupying its old position fifteen months after her delivery, or four years and a quarter after the miscarriage, to which she originally referred all her sufferings.

A woman, twenty-eight years old, had been married nine years, had given birth to one child in the second year of her marriage, and five years before I saw her had undergone some operation for the removal, as she said, of an uterine tumour. Ever since this operation she stated herself to have suffered from leucorrhœal discharge, with pain of a burning character in the neighbourhood of the uterus, much aggravated by defæcation or by sexual intercourse, and being especially severe at the menstrual periods. The perineum was somewhat torn, the uterus low down, its orifice circular with perfectly smooth edges, and its posterior lip was connected firmly to the posterior vaginal wall, and cicatrices ran from it for some distance to the left side of the vagina.* The uterine sound entered easily with its concavity directed backwards for two inches and a half; on turning it round the tumour completely disappeared. For the first four or five days after the replacement of the uterus, the patient expressed herself as feeling much relieved; but her symptoms then returned, and have continued just the same as before for four years and a half, during which time I have had the opportunity of frequently examining the condition of the uterus, and have always found it occupying its natural position.

But be the value of cases such as these what it may, as proving on the one hand that flexions of the womb do not of necessity give rise to any suffering, and on the other, that the removal of a flexion of the organ may not be followed by the least relief to a patient's distress, the fact still remains, that misplacement of the womb is in very many instances accompanied by various uterine ailments, such as were not experienced before its occurrence. The question, however, suggests itself with reference to these cases, as to whether their history presents any peculiarity which would warrant our believing that the symptoms are due not simply to the misplacement, but to some

* It is not without interest, as illustrative of the futility of many of the suggestions made for the cure of these ailments, to notice the existence in this case of that very condition of adhesion between the cervix uteri and the vaginal wall, on the production of which by surgical interference M. Amussat has insisted as so important a means of cure.

other morbid condition with which the misplacement is associated, or to the two causes together? Now, there are circumstances which appear to favour the opinion, that in the majority of instances the symptoms are due not to misplacement alone, but to misplacement accompanied by some other morbid state of the womb.

The fact, that of 101 instances of version or flexion of the womb,* 95 occurred among married women, 6 only among those who were single, tends to connect it with the performance of the highest functions of the sexual system—with pregnancy, delivery, and their consequences. This view is further confirmed by the circumstance that the age at which the majority of women suffer from its symptoms, coincides with that period of life at which those functions are in most active exercise. Valleix states that the majority of his patients referred the commencement of their ailments to between the ages of twenty and thirty years; while the fact that twenty-seven out of the thirty-three patients of whose cases I have preserved a record were under forty years old at the time of their coming under my care, points in the same direction. Moreover, in thirty-four out of fifty-seven cases of M. Valleix, and in fifteen of my twenty-six (or fifteen of twenty-two, if for the moment four cases where marriage had proved sterile are omitted), the patients referred the commencement of their ailments to delivery or miscarriage; to a time, in short, when the womb was larger, heavier, and more abundantly supplied with blood than at other seasons, when its recently stretched supports were less able than at other times to keep it in its proper position, and when those attacks of circumscribed peritonitis, by which adhesions are produced between it and the adjacent parts, are specially likely to occur. The case related in the last Lecture (p. 195) shows how in these conditions the enlarged uterus may be retroverted, and shows further how, in spite of its gradual reduction in size, the misplacement may still continue; its symptoms aggravated after each fresh miscarriage,

* The above numbers are derived from the sixty-eight cases of Valleix, with thirty-three of my own.

which reproduced, though in a slighter degree, the same train of evils as attended the first occurrence of the accident. Of the remaining eighteen patients, three had fibrous tumours in the uterine walls, so that the misplacement of the womb might be regarded as in part due to their presence, while in a fourth there was a small tumour, probably ovarian, behind the uterus, which not merely retroflected it, but having become adherent both to the womb and to the rectum, prevented the uterus from resuming its proper position even after the tumour, in which suppuration took place, had discharged its contents by the bowels. Two patients, one of whom was unmarried, referred their symptoms to a menstrual period, which had been attended by an unusual amount of suffering, and one dated them from immoderate sexual intercourse. Once the symptoms succeeded to an attack of vaginitis, which was most likely accompanied by peritoneal inflammation, since the anteflected womb was bound down in its unnatural position; and in one more, in whom the enlarged and anteverted womb was similarly fixed in the pelvis, there was a history of abdominal pain and tenderness occurring causelessly five years before. Twice the accident seemed to have succeeded to some sudden violent exertion, and in one instance (that in which the symptoms persisted after the removal of the misplacement), the patient dated her suffering from some operation performed five years previously, apparently for the removal of a polypus. There still remain four patients concerning the cause of whose ailments no adequate explanation is given. It is not without interest, however, to observe, that one of these had suffered from the same symptoms as those which led to her placing herself under my care for fifteen years, they having come on shortly, though not immediately, after the birth of her first child, and that she had given birth to five more living children during this period. Lastly, in an unmarried lady, thirty-four years old, in whom the womb was completely anteverted, the symptoms, which were of eight months' duration, coincided exactly with the commencement of disorder of her liver, accompanied by severe suffering from hæmorrhoids, discharge of blood per anum, and

other indications of congestion of her abdominal and pelvic venous system ; while her recovery, which was very complete, took place independent of any attempt to rectify the misplacement of the womb.

It seems, then, that in by far the majority of instances, the development of all the symptoms of flexion or version of the uterus coincided with the operation of some cause which increased the size of the womb, or produced congestion of the pelvic viscera ; and further it may be added, that the almost immediate relief which followed rest, local depletion, and the due regulation of the bowels, seems to show that to these associated ailments, rather than to the mere misplacement of the womb, the patient's sufferings were to be attributed. Not infrequently, however, the relief, though striking, was of short duration ; and the patient had not long followed her usual avocations, or not long returned to her husband's bed, before many of her former symptoms returned. But this is by no means peculiar to misplacement of the womb ; for we see illustrations of it in the increased suffering which, in almost every uterine ailment, attends upon the menstrual period, and in the aggravation of all previous uterine discomfort, which in many women succeeds to marriage, and which is sometimes the occasion of ailments being brought to light whose very existence was previously unsuspected.

A woman, aged thirty-five, was admitted into St. Bartholomew's Hospital, and gave the following history of herself :— She had been married eleven months, but had never been pregnant. Previous to her marriage her health had been good, with the exception that menstruation, though regular, was always very painful. Since her marriage, however, she had suffered much from constant aching pain round the loins, felt most in walking, and constant desire to pass water, while her menstruation had become very frequent in its return. On making an examination, the os uteri, which was small and circular, was found directed backwards ; while above the anterior wall of the vagina a tumour of a rounded form was felt pressing forward against the bladder, and could also be distinguished by means of a sound introduced

into that organ. I imagined the body to be formed by the ante-flected uterus; though, after careful and repeated examinations, in the course of which I endeavoured unsuccessfully to introduce the uterine sound, I changed this opinion, and came to the conclusion that it was a fibrous tumour growing from the anterior uterine wall. Whichever view be correct, the case equally well illustrates the fact that an uterine ailment may remain quiescent, as far as the production of symptoms is concerned, for an indefinite period, which yet will be the cause of much suffering, if any accident gives rise to an increased afflux of blood towards the womb.

Bearing in mind, then, their compound origin, we may next inquire into the *nature of the symptoms* which usually accompany versions or flexions of the womb. In the two instances in which the misplacement occurred suddenly as the result of over-exertion or straining, much pain was at once experienced, and was referred to the neighbourhood of the uterus; while in the case of retroversion there was considerable difficulty in micturition, and frequent desire to pass water. In other cases, however, the supervention of the symptoms was gradual; discomfort about the pelvis, accompanied by unusually profuse, and often unusually painful menstruation, being the symptoms which first excited the patient's notice, and which, by their persistence and their increase, compelled her to seek for relief.

The following were the more prominent symptoms in the thirty-three cases of version or flexion of the uterus, of which down to the present time I have preserved a record:—

	In the total thirty-three cases.	In nine of them the uterus was anteverted or anteфлекed.
Menorrhagia	10	1
Dysmenorrhœa	11	3
Leucorrhœa	17	2
Pain, or other discomfort in micturition	10	4
Pain	31	9
Difficult, or painful de- fecation	16	2

Of the above thirty-three patients, thirty were married, of

whom three were sterile. The remaining twenty-seven had given birth to seventy-three children, and had had twenty-one miscarriages; numbers which yield results scarcely differing from those which we meet with among persons afflicted with uterine disease in general; and whose labours amount to 2·7, their miscarriages to 0·47 to a marriage, while one in 8·5 of the total number proves sterile.

The above enumeration of symptoms, and of their comparative frequency, which tallies in the main remarkably with the statements of M. Valleix on the subject, must be sufficient to show that either the misplacement itself, or the state of the uterus associated with it, is adequate to produce much positive suffering and much functional disorder. The pain which was experienced in all but two of my cases, and in sixty-four out of sixty-five of those of M. Valleix, varied much in its intensity. It was a constant sense of pain and aching in the back and loins, and of pain shooting down the thighs; often though not always accompanied by a sense of bearing down, and by sensations of the same kind as in general accompany ordinary descent of the womb, though more distressing in their character. In very many sexual intercourse was attended by great pain, while the suffering which it produced had led in some instances to its complete discontinuance. Those patients in whom the abiding pain was the most considerable, suffered also from occasional attacks of paroxysmal pain, which was sometimes of extreme intensity, and had the character of hysterical colic such as one meets with occasionally in various uterine ailments, and such as is especially associated with dysmenorrhœa. I have not been able to ascertain that there is any constant relation between the direction in which the womb is flexed and the seat of the pain in the anterior or posterior part of the pelvis, though difficult and painful micturition is obviously more frequent in cases of anteversion or anteflexion of the womb, and difficult defæcation in cases where the womb is retroflexed or retroverted. I doubt, however, very much the extent to which any of these symptoms can be referred to the mere mechanical effects of the displacement of the womb, for in

three out of the six cases in which difficult micturition attended misplacement of the womb backwards the organ was retroflexed and not retroverted, and consequently the bladder was subjected to no kind of pressure. Pain and difficulty in defæcation, too, are by no means such constant attendants upon retroflexion as might be reasonably expected if they depended upon a simply mechanical cause. The symptom was indeed for a long time regarded as of purely mechanical origin, and the presence of mucus in the evacuations was looked upon as conclusive evidence of the irritation of the bowel by the misplaced womb. Further observation has shown, however, that this symptom is by no means constant in cases even of very marked retroflexion; that further, it is often absent in cases where the growth of fibrous tumours from the posterior wall of the uterus exerts very considerable pressure on the bowels, while it is far from uncommon in various uterine ailments attended with much irritation of the neighbouring viscera, even though unaccompanied by any enlargement or misplacement of the womb. The same fact holds good still more absolutely with reference to the constipation, for the retroflected fundus is never found so to compress the rectum as to interfere with the easy introduction of the finger into the bowel, and consequently cannot mechanically prevent the escape of its contents; while further, no accumulation of fæces is found to take place above the fundus of the womb; and lastly, constipation, even more obstinate than that observed in these cases, attends upon a large number of ailments, especially of an anæmic or hysterical kind, in which there is no local affection of the womb. The leucorrhœa, the dysmenorrhœa, and the menorrhagia, though of very frequent occurrence, are perhaps less characteristic than the symptoms already enumerated, inasmuch as they are frequent attendants upon so many disorders of the womb. It is, however, worth notice that the twenty-one instances of disturbance of the menstrual function occurred in twenty different persons; but I am not prepared to state that there was greater flexion of the womb where the menstruation was most painful than in other cases, or more marked enlargement, or

apparent congestion of the organ where the menstruation was most profuse.

Lastly, with reference to the influence of these conditions on fecundity. Of the thirty married women one had become a widow, and one had passed the child-bearing age before any symptoms of uterine ailment appeared, while in five the symptoms were of less than a year's duration, and consequently there had not been time for the influence of the ailment in this respect to become evident.

Of the remaining twenty-three, four gave birth to live children at the full period, after the womb had been misplaced; and one of this number had five live children at the full term of uterogestation, in spite of the existence for fifteen years of all the signs of retroflexion of the uterus.

In one of the above four, pregnancy was preceded by the replacement of the organ; but in the other two, not only was the womb misplaced at the time of conception, but was ascertained to continue so after delivery.

Four having previously given birth to living children, miscarried after the development of symptoms of uterine misplacement; and in one of the number, miscarriage had twice occurred, while fourteen, having previously given birth to one or more living children, had passed more than a year since the commencement of the symptoms without conceiving. In three of this number, however, though still within the child-bearing age, conception had not taken place for two years in one instance, and for four years in the other two, previous to the commencement of the symptoms of misplacement of the womb.

The above detail of symptoms shows, I think, that while versions and flexions of the womb by no means invariably produce either considerable local suffering or considerable functional disturbance, their presence or absence is yet far from being a matter of indifference, and we must admit them as constituting a distinct class of by no means unimportant ailments of the womb. But even though they were themselves of but little moment, it would nevertheless be very necessary that we should

learn to *distinguish them* from other and more serious uterine ailments with which some of them are, on a superficial examination, very likely to be confounded.

With ordinary care, indeed, any misplacement of the whole uterus, assuming as it almost always does the form of retroversion, can scarcely be overlooked or mistaken, for the fundus uteri thrown backwards, and often downwards, into the hollow of the sacrum, and the mouth of the womb directed forwards, and tilted upwards against the symphysis of the pubes, are characteristic indications of the change in its position. The sources of fallacy are, however, far more numerous in those cases in which the organ is flexed and its body is bent upon the cervix, producing a tumour which may be mistaken for ovarian disease, or for a fibrous tumour of the uterus, or for one of those extravasations of blood around the substance of the womb, to which, under the name of uterine hæmatocele, attention has of late years been especially directed. In cases where the uterus is bent forwards, the sources of error are less numerous than in cases of its retroflexion, and I am not aware of anything except a fibrous tumour of the anterior uterine wall which is likely to throw uncertainty upon our diagnosis, though I have found the discrimination between flexion of the womb and the presence of a fibrous tumour in its wall to be sometimes so difficult as to be almost impossible. The tumour formed by a flexion of the womb usually begins immediately above its cervix, and the substance of the organ may be traced passing over into it. At the same time no enlargement of the uterus can be felt by the finger carried in front of the cervix in cases of retroflexion, or behind it in cases of ante flexion, while if the patient lie upon her back, and pressure is made with one hand over the pubes and the other is in the vagina, the absence of any pelvic tumour may in general be readily ascertained. Moreover, in many instances, pressure with the finger in the vagina upon the uterine tumour imparts to it a degree of mobility without at all altering the position of the cervix, such as would not be possible in the case of a fibrous outgrowth from the organ. This, however, is not

always practicable ; for on the one hand, the tenderness of the flexed womb not infrequently prevents any steady pressure upon it being borne by the patient ; and on the other hand, steady and long-continued pressure does not always modify the position of the organ, and this even though no morbid adhesion connect its fundus with adjacent parts. In a very large number of the doubtful cases we should remain in uncertainty for a very long time, and come at length to a hesitating decision, if it were not for the help afforded us by the uterine sound. If this instrument is introduced with its concavity directed either backwards or forwards, according as the tumour is situated in front of the cervix or behind it, and if it be then gently and carefully turned round, we shall find that the tumour, previously so distinct, will completely disappear, though often to be immediately reproduced with the same character, and of precisely the same size as before, the moment that the instrument is withdrawn. The sound affords at the same time the opportunity of ascertaining the perfect mobility of the uterus, and the absence of any such increase of its weight as the existence of any tumour in its walls must of necessity occasion.

Valuable, however, as is this means of diagnosis, it is yet not without some sources of fallacy, while its employment leads occasionally to no satisfactory results. The instrument will sometimes not pass beyond the internal os uteri ; and though pressure upwards against the tumour so as to lessen the bend of the cervical canal not infrequently enables us to introduce it, yet this is not always the case ; and I need not say that force is never allowable in order to overcome the difficulty. But even in these cases, the absence of any considerable sense of weight when the organ is poised upon the instrument strengthens the presumption against the existence of any uterine tumour. Further, a fibrous tumour projecting into the recto-vaginal pouch may present many of the characters of the retroflected womb, while the fact that such a growth not infrequently flexes the organ, and causes it slightly to deviate from its natural direction, increases the probability of error. If, too, on turning round the sound after its introduction,

the handle of the instrument be much depressed, its other end will of course be correspondingly raised, and an uterine tumour being thus carried out of easy reach of the fingers, may apparently disappear, and the case be thus mistaken for one of simple flexion of the womb. The safeguard against this error is found in the precaution of not otherwise altering the position of the sound, when the instrument is turned round. The existence of adhesions, indeed, prevents any attempt at replacing the flexed womb from being successful, and thus deprives us of one means of diagnosis, though even in such cases the direction in which the sound enters with facility, and the fact that in no direction but that one will it enter at all, are not without value. Ovarian tumours are almost always larger and more spherical than the retroflected fundus uteri, and the finger will in general detect the body of the uterus driven forwards by the tumour, while with the finger of one hand in the vagina, and the other hand over the pubes, the practitioner will in general be able to satisfy himself as to the exact relations of the organ, even though attempts to introduce the sound should not be successful. The same statement also holds good with reference to uterine hæmatocele, and further, the tumour which it produces does not present the same degree of resistance as the retroflected uterus. The largest uterine hæmatocele, however, which has ever come under my notice had produced complete retroversion of the organ, and thus rendered diagnosis very difficult. In such a case, and indeed in others where tumours have flexed the womb, or have much altered its position, the risks of error are very great indeed. I do not mean to claim for the sound the advantage of always enabling us to come to a correct conclusion, but only to express my conviction that it is a very valuable help to diagnosis, and that it restricts the doubtful cases within very narrow limits, and enables us in the great majority of instances to express ourselves at once and positively with reference to what otherwise would often have been very obscure.

Lastly, we come to the consideration of the appropriate *treatment* of these misplacements; a question which has received two

different answers, according as practitioners have confined themselves to the endeavour to remove those ailments with which the malposition was associated, and to which the symptoms appeared to be directly due; or, as they have aimed at something more, and have attempted to restore the uterus to its right position, and to maintain it there by mechanical contrivances. Of the continental writers who first called special attention to these misplacements of the womb, Schweighäuser contented himself with the employment of remedies calculated to remove the constipation, and to relieve the congestion of the pelvic viscera, and states that having accomplished these objects he found that the uterus returned invariably to its proper position; and Schmitt also coincided in the main in the same opinion. A view, in many respects similar, has been ably advocated by Dr. Oldham,* who regards the misplacement of the womb as being invariably the secondary consequence of its enlargement, and insists on the special advantages of the use of the bichloride of mercury in removing this condition. Schmitt attempts in his essay to discriminate between cases of primary misplacement of the womb, and those in which its altered position is secondary to some enlargement, or to some inflammatory affection of the organ. He never employs any means for the purpose of replacing the womb so long as either constitutional disturbance or local tenderness of the uterus is present, and recognises the frequency of spontaneous replacement of the womb after their removal; for accomplishing which he trusts, like Schweighäuser, chiefly to rest, and to the due evacuation of the intestinal canal by the regular administration of saline aperients. If the misplacement should still continue, or if the case was already chronic in character at the time of its coming under treatment, he approves of careful attempts being made to replace the womb. These attempts consist in pressure upon the fundus with the finger in the vagina, or sometimes in the rectum, and he throws out the suggestion that possibly in some instances a contrivance employed by Pro-

* *Guy's Hospital Reports*, 2nd series, vol. vi.

fe sor Richter, of Moscow,* for replacing the womb retroverted in pregnancy, may be of service. As a subsidiary means tending to promote the replacement of the organ, Schmitt further recommends that the patient should lie upon her side with the hips raised, an attitude to be changed only for that on the abdomen, and that she should carefully avoid lying on the back; recommendations, all of which are much insisted on by many practitioners at the present day, who place their patients on the prone couch in every case of retroversion or retroflexion of the womb. Lastly, whenever the disposition to retroversion of the womb continues in spite of treatment, he employs one of Levret's disk pessaries, made with an aperture sufficiently large to admit of its embracing the neck of the womb.

This essay of Schmitt's to which the particulars of nine cases are appended, and which is even at the present day by far the most complete and most valuable contribution to our knowledge of the subject, continued to be the guide of practice in Germany until the publication of Dr. Simpson's ingenious observations on the subject. Dr. Simpson not only drew attention in this country and in France to the frequency of these misplacements, which had previously been so much underrated, but he also insisted on their mechanical rectification as the most important means of removing their symptoms, and suggested a novel contrivance both for replacing the womb and for maintaining it in its position.

His first proposal, to replace the womb by means of the uterine sound (an instrument which owes almost all its practical utility to the alterations which he has made in its form), seems to have been anticipated by Osiander in 1808,† who describes the introduction of a slightly curved instrument into the retroverted womb, by turning which round, the fundus uteri was at once restored to its proper position. Osiander's suggestion, however,

* See Richter's *Synopsis Praxis Medico-Obstetricæ*, 4to, Mosquæ, 1810, plate ii. p. 70, for a description of this instrument, which was composed of a curved stem of wood, terminated by a kind of plug which was covered with a cushion, and was intended to answer the purpose of a long and strong finger in replacing the womb.

† *Med. Chir. Zeitung*, 1808, vol. iv. p. 170, as quoted in a note at p. 54 of Schmitt, *op. cit.*

was disregarded, and his facts were discredited and soon forgotten. Velpeau claims* the invention of a pessary with a somewhat elastic stem projecting from the centre of a semicircular disk. The disk being turned forwards in cases of retroversion, and backwards in cases of the opposite kind of misplacement, the tendency of the elastic stem would be gradually to restore the womb to its proper position, and gently to maintain it there. His trials appear, however, by his own admission, to have been but few, and their results were not encouraging.

Dr. Simpson, believing that in the great majority of instances the symptoms associated with misplacement of womb, and also the organic changes which it may present, are mainly dependent on its malposition, insists on the reposition of the womb, and on the employment of mechanical means to secure its continuing in its place. He proposes to accomplish the first object by means of the uterine sound, and the second by means of a wire stem introduced into the cavity of the womb, and maintained there by suitable contrivances. This instrument underwent several alterations in Dr. Simpson's hands, and although it has since been modified by the late Professor Kiwisch of Prague, yet Simpson's uterine supporter, with the improvements devised by M. Valleix of Paris, appears to me to be by far the safest, and the best adapted for its purpose.

Dr. Simpson's paper was not accompanied by any detail of cases, and contained scarcely any hint as to possible dangers or difficulties in the employment of his instrument. The attention of practitioners in this country had been called by him to an ailment, the possible occurrence of which they had previously scarcely recognised, while the simplicity and ingenuity of his proposed means of cure recommended it to almost universal adoption. Some doubts, indeed, were expressed on theoretical grounds, as to the probable result of maintaining a foreign body for weeks or months together in the uterine cavity. These were, however, silenced for a time by the detail of cases by different writers, in which the instrument was worn for a long period, not

* *Lib. cit.*, p. 102.

only without injury, but with very obvious advantage. Still, by degrees, unfavourable results began to be more generally heard of; much uterine pain, almost constant leucorrhœa, associated with a distressing sense of pruritus; menorrhagia, and hæmorrhage between the menstrual periods, were found to be of no very rare occurrence. The advocates of the mechanical treatment of these ailments, too, became in time impressed with the necessity of greater caution. They not only removed the instrument at the menstrual periods, which at first they were not accustomed to do, but tried to habituate the womb by degrees to its presence, introducing it at first for an hour or an hour and a half at a time, while some even recommended that it should on no occasion be allowed to remain longer than three or four hours within the womb. Inconveniences such as these, the incompleteness of the patient's temporary recovery in some instances, the frequency of her relapse in many more, the occurrence of serious inflammation of the womb, or of dangerous peritonitis, and some instances of death from the use of the instrument, have now led to its almost universal discontinuance both in this country and in Germany. The deserved reputation of M. Valleix indeed maintained its use to some extent in Paris; while Dr. Simpson's singular good fortune seems still to keep him a stranger to those evils which have befallen other practitioners, since his paper on misplacements of the uterus, republished after an interval of seven years, contains no additional reference to the failure of this mode of treatment, no mention of its risks, nor any suggestion as to how they may be best avoided.

As there can be no doubt but that the mere misplacement of the womb does of itself sometimes produce suffering, and occasion functional disturbance, so it must also, I think, be conceded that the removal of such misplacements by the sound, and the maintenance of the womb in its proper position by the uterine supporter, have been followed by the cessation of suffering and by permanent cure; and further, that these results have been obtained in some cases which had been submitted to other modes of cure without benefit.

These advantages, however, are in my opinion more than counterbalanced by the following evils, which without entering upon long and, I fear, useless disputes, I will simply enumerate.

1st. The safe employment of the instrument requires that, as a general rule, its use should be continued for only a very few hours at a time; a necessity which implies that every woman who is submitted to this mode of treatment shall undergo two vaginal examinations every day, the one for the introduction of the instrument and the other for its withdrawal.

2nd. The quietude which its use imposes, and the restrictions to which the patient is compelled to submit in order to avoid severe suffering and the risk of serious danger, are at least as absolute in their kind and as irksome to be borne as those which any other mode of treatment involves, while it is necessary to continue them for as long a time.

3rd. In spite of all precautions the treatment is generally painful, often dangerous, sometimes fatal; and the untoward accidents have not been by any means constantly attributable to want of prudence either on the part of the practitioner or of his patient.

4th. Cure even by the long-continued employment of this means for several months, is uncertain, while relapses are very frequent after the mechanical support is discontinued; besides which the permanent cure of the misplacement is far from being always followed by the cessation of the symptoms.*

* To meet assertions by mere counter-statement is invidious, and carries no conviction to those whose opinions differ from our own. I will therefore adduce here the testimony of two men whose position and character entitle their opinion to especial weight.

In the discussion before the Academy of Medicine at Paris, M. Dubois stated that he had himself treated more than twenty patients by means of the uterine supporter, which in some instances was worn for several months, but that the misplacement reproduced itself within a very short time after the removal of the instrument; and that he had made a similar observation in the case of many patients who, having been thus treated by M. Valleix and Dr. Simpson, had been dismissed by those gentlemen as cured.

Professor Scanzoni, in a note appended to the fourth edition of Kiwisch's work on the *Diseases of Women*, which he edited after the author's death, makes the following statement:

"The observation of fifty-six cases of flexion of the uterus during the past four

On these accounts, though I have tried the uterine supporter in a few cases, I have now for some time quite given up its employment, and content myself with a mode of treatment, which, though it seems to promise less, yet almost always affords great relief, which in a large number of instances quite removes the patient's sufferings, and is not infrequently followed by the complete rectification of the position of the womb.

The principle, indeed, upon which I act in the management of these cases amounts pretty much to this: that to the best of my power I take care of the general symptoms, and leave the misplacement to take care of itself. In a very large number of instances the misplacement succeeds to delivery or miscarriage, and the womb is, as might be anticipated, in a state of imperfect involution. In these circumstances rest for a season in bed or on a couch, occasional leeching if there be much tenderness of the organ, and the strictest attention to the condition of the bowels, which should be kept freely open by moderate doses of saline aperients, seldom fail speedily to relieve the congestion of the womb and of the pelvic vessels, and to place the organ in the most favourable condition for the accomplishment of those processes by which its bulk may be reduced. With the approach of each menstrual period, precautions should be redoubled, for menstruation is very often excessive in quantity, and also irregular and over-frequent in its return; anticipating the proper time of its reappearance, and, moreover, after its apparent cessation coming on again causelessly or on the slightest occasion. In proportion as this evil is chronic, may we use more decided means to check it. The sulphuric acid and sulphate of magnesia if the years, compels me to express my decided conviction that the mechanical treatment of this affection so elaborately set forth by the author is either useless or positively mischievous." After adducing some reasons for this opinion, he concludes: "I will merely add that since I have quite discontinued leaving the sound in the uterus, employing the uterine supporter, and so on, and have contented myself with the use of cold vaginal injections, with the antiphlogistic treatment of any chronic uterine inflammation, and the application of caustic to any ulceration of the os uteri, and with the endeavour to remove the chlorotic symptoms which are seldom absent, I have been much better satisfied with the results of my treatment than I was at the time when I allowed myself to be seduced into the application of a variety of mechanical contrivances."—*Op. cit.*, vol. i, pp. 135, 136.

bowels be at all constipated, the sulphate of alum if that condition do not exist, or the gallic acid or infusion of matico, may be given internally, accompanied, if there be much pain, with the tincture of henbane, or of Indian hemp, neither of which produces constipation. Cold enemata twice a day may be employed after the second or third day of the discharge, and in more obstinate cases, even vaginal injections of matico or alum. I have not, however, ventured upon those intra-uterine injections or cauterizations of the inner surface of the womb which Kiwisch sometimes resorted to, both during the presence of the catamenia and also in the intervals between their flow.

In almost all cases of these ailments, a state of general debility, often of very considerable anæmia, is present, and chalybeate remedies are therefore nearly always of service. As a general rule, there is none more suitable than the combination of iron with an aperient salt, which I recommended to you when speaking of the management of cases of menorrhagia.* It is obvious, however, that your prescriptions may here, as in other cases, require to be varied according to the idiosyncracies of your patient or the peculiarities of her case.

After the general uterine tenderness has been diminished if necessary by previous leeching, recourse may be had with advantage to the cold douche, which both restrains hæmorrhage and leucorrhœa, lessens congestion, and tends to bring about contraction of the lax tissues of the enlarged womb. Sometimes, however, the douche occasions pain; and when this is the case, the cold hip-bath, cold sponging of the loins, and cold vaginal injections may be substituted for it, since though less efficacious they exert a similar influence.

Pain, referred to one or other ovarian region, and varying in severity much and causelessly, is a very frequent attendant on these malpositions of the womb. It is generally much relieved by counter-irritation, by means either of small blisters not kept on for a sufficiently long time to produce vesication, by the em-

* See Formula No. 1, p. 41.

ployment of a croton oil liniment, which must be applied by means of a piece of sponge, not rubbed into the part, or by the use, if the skin be very irritable, of the milder liniment of aconite and belladonna.*

As in the course of other uterine ailments, so in these, there are occasional attacks of violent paroxysmal pain, which, though not limited in their occurrence to the menstrual periods, are more apt to come on at those times, and sometimes call for immediate relief. The local application of chloroform often gives ease; and the mitigation of suffering which it procures frequently continues. I have, however, in a few instances, known the pain to be more severe and more lasting than the remedy so applied could remove; and when that is the case, its present intensity may be relieved by inhalation of chloroform, and its return prevented or mitigated by the occasional use of opiate enemata, or by the administration of camphor and morphia, or camphor and belladonna, which last remedy, though somewhat uncertain, is often of very great utility.

But you may inquire whether in these cases I reject not only the use of permanent mechanical supports for the uterus, but also the employment of mechanical means for its replacement? Now I believe that, with the exception of those rare instances in which the misplacement is the result of some sudden shock or violence, mechanical interference is not desirable; and that the womb will of its own accord gradually revert to its proper position. While, therefore, I use the sound as a means, and I believe a very valuable means, of diagnosis, I do not resort to that frequent replacement of the organ by it which has been adopted by some practitioners, who yet hesitate to leave any kind of support permanently with the uterus. I do not follow this plan, because while suffering occasionally remains for a considerable time after the introduction of the instrument, the womb almost invariably falls back again to its previous unnatural position after its withdrawal.

* See Formula No. 9, p. 142.

There has been much debate about the use of pessaries in these cases, since, while still employed by some practitioners, they are decried as altogether unserviceable by others, and chiefly by the advocates of the intra-uterine supporter. It must be confessed that they are very imperfect means of support, but, nevertheless, I have seen much relief from their employment in cases of retroflexion and retroversion of the womb. They serve to keep the uterus comparatively fixed in the pelvis, and spare it from many of the painful shocks to which the organ is otherwise almost unavoidably exposed when the patient begins to move about, and especially when she sits. They moreover diminish, in many instances, the painful straining efforts at defæcation; a fact which shows how much more that ailment partakes of a neuralgic character than of that of a disorder due to mechanical causes. The kind of pessary which has seemed to me most serviceable is one of india-rubber, of an oval form, inflated with air, which, being introduced in the *cul-de-sac* between the uterus and rectum, serves to support and to keep steady the fundus of the womb. The recent employment of vulcanized rubber for these purposes, and the various modifications of these instruments which the new material has rendered possible, may probably lead to the invention of some useful varieties of pessary adapted to the peculiarities of different cases. Almost invariably, however, the simplest contrivance is that which is practically the most useful.

LECTURE XIII.

MISPLACEMENTS OF THE UTERUS.

INVERSION OF THE UTERUS, generally occurs during labour ; sometimes spontaneously ; symptoms usually very formidable. Its chronic form ; tendency of it to destroy life ; occasional exceptions to this rule ; alleged spontaneous replacement of uterus. Diagnosis, and management of accident when recent ; state of womb modifies chances of replacement, which are very small, except when attempted immediately.

Chronic Inversion, its management ; extirpation of uterus ; causes modifying success of operations. Errors of diagnosis, how to avoid them ; further cautions as to best mode of operating.

Inversion from Polypus. Practical cautions respecting it,

ASCENT OF UTERUS ; its various causes, and diagnostic value.

THOSE forms of uterine misplacement to which our attention has hitherto been directed, claimed our notice as much from the frequency of their occurrence as from the importance of their symptoms. We found them to be the occasion of discomfort of various kinds, and not seldom the exciting cause of much disturbance of the uterine functions ; but in scarcely any instance were they of themselves dangerous to life, while they moreover always admitted of much palliation, often indeed of complete cure.

We have now, however, to turn to the study of a form of uterine misplacement which, though happily of very rare occurrence, is one of the most grievous accidents which can befall a woman, inasmuch as its almost invariable tendency is to destroy life, while the only remedy to which we can resort for its cure is an operation of a most hazardous kind, and which mutilates the patient, and renders her for ever incapable of performing the functions of her sex.

Inversion of the uterus, the turning of the organ inside out, is an accident clearly impossible in the natural condition of the unimpregnated womb ; it being obviously essential for its occurrence that the organ should have attained a certain size, and

that its walls should be comparatively yielding. It is indeed only at an advanced period of pregnancy that these conditions are generally met with, and only during labour that an exciting cause is likely to be superadded capable of producing the misplacement ; but at that time violent traction at the funis by some unskilled practitioner, before the detachment of the placenta, may mechanically invert the womb, or the organ may by its own contractions invert itself, just as the intestine does in cases of intussusception. The late Mr. Crosse, of Norwich, in his very elaborate *Essay on Inversion of the Uterus*, which unhappily he did not live to complete, states* that in 350 out of 400 cases of inverted uterus of which he had found mention, the accident occurred as a consequence of parturition : and there can, I think, be no doubt but that the real proportion of cases in which it is traceable to this cause is much higher than seven to one. Of the remaining fifty cases, forty were said to have occurred in connexion with the presence of a polypus in the interior of the womb, the accident sometimes taking place spontaneously, in other instances resulting from traction at the outgrowth in some attempt to accomplish its removal.

Almost all of those rare cases in which the uterus is alleged to have become inverted independently of either of the above causes, are deficient in such details as are needed to substantiate their correctness, and doubt may be reasonably entertained with reference either to the accuracy of the diagnosis, or else as to the truthfulness of the history related by the patient.† Enlargement of the uterine cavity, however, associated with some cause capable of exciting contraction of its fibres, may be looked on as the two conditions essential to the inversion of the organ ; and where these two coexist, as in Dr. Thatcher's case of enlargement

* Part ii. p. 70.

† Bandelocque's remarkable case of alleged inversion of the womb in a girl fifteen years old, who suffered from menorrhagia, appears to me to be one in which we may be allowed to entertain some doubt as to the accuracy of the diagnosis ; while nothing can be vaguer than the history of Lisfranc's patient (*Clinique Chirurgicale*, vol. iii. p. 380), whose symptoms are said to have existed five years before she came under his observation.

of the womb from hydatids,* there the possibility of inversion taking place must be conceded.

No instance has come under my own observation of uterine inversion in the recent state, and indeed the annals of the Dublin Lying-in Hospital and those of the London Maternity Charity sufficiently illustrate the rarity of the accident, since it was not once met with in a total of more than 140,000 labours.† Its *symptoms* as detailed in works on midwifery are so appalling and so characteristic, that it would seem almost impossible either to overlook or to misinterpret them. Sudden collapse, accompanying abundant hæmorrhage, associated with disappearance of the tumour formed by the uterus in the abdomen, and the presence of a large spherical body either just within the vagina, or projecting beyond the external parts, are the ordinary indications of the womb having been inverted; and the occurrence even of some of these accidents in the third stage of labour, or just after the detachment of the placenta, ought at once to excite the suspicions of the attendant with reference to their almost invariable cause.

In spite of this, however, in a very large proportion of instances in which inversion of the uterus in the chronic state has come under observation, the accident, though clearly traceable to delivery, has been overlooked at the time of its occurrence, and almost the only opportunity of replacing the womb has thus been lost. The history given of herself by a patient who fourteen months after her delivery was admitted under my care into St. Bartholomew's Hospital, was that the detachment of the placenta, which she believed was effected by the hand, was accompanied by hæmorrhage so profuse as to occasion syncope: and she was told by the nurse that the womb was brought down and projected externally, but was apparently replaced by the gentleman in attendance. Nothing further of any consequence transpired for a week from this time, when on sitting up to have

* As narrated in Crosse's *Essay*, part i. p. 57.

† Hardy and McClintock, *Practical Observations in Midwifery*, p. 223; and Ramsbotham, *Obstetric Medicine*, &c., 3rd ed. p. 719.

a motion the body again projected externally, but was once more replaced by the nurse, since which time it had never again protruded beyond the vulva. In other instances there have been even fewer symptoms to engage attention, and nothing has been observed except some hæmorrhage succeeding the spontaneous expulsion of the placenta, until the return and the persistence of the bleeding have led to a vaginal examination and to the discovery of the then remediless displacement of the womb. In these cases there can be no doubt but that the uterus has inverted itself, and that this accident has been brought about, not by simple want of contractility of the organ, but by the irregular and unequal contraction of its different parts; a state of comparative relaxation of the os and cervix co-existing with violent action of its fundus.* The only circumstance, indeed, which tends to prevent our receiving this as the ordinary explanation of the occurrence of inversion of the womb during labour, is its not happening in institutions such as the Dublin Lying-in Hospital, in which the last stage of labour is wisely conducted; while spontaneous inversion of the organ would obviously be nearly as liable to happen among patients in a Lying-in Hospital as elsewhere.

Profound shock to the nervous system and profuse hæmorrhage are, as has already been mentioned, the two characteristic symptoms of inversion of the uterus. Dr. Radford has shown, however, that except in cases where the placenta was still partially adherent to the womb, the hæmorrhage is by no means so formidable as might beforehand be anticipated, and that the

* This mode of production of inversion of the womb during labour, first recognised by Saxtorph, *Gesammette Skrifter*, 8vo, Kopenhagen, 1804, p. 301, has been fully and ably set forth by Dr. Radford, *Dublin Journal* for 1837, Nos. 34 and 35; and is now generally received as a frequent, if not the most frequent, mode in which it is brought about. Dr. Simpson, in expressing his adhesion to Dr. Radford's views—see his *Obstetric Works*, vol. i. p. 817—refers to two cases in which inversion of the uterus, with expulsion of the child, took place after the mother's death. Both of the cases are very marvellous. Boerner's patient, indeed, had reached the full period of pregnancy; but she whose history is very imperfectly recorded by Klaatsch, was only in the fourth month; and the inversion of the womb is alleged to have occurred in the second night after her death. One is at a loss as to the inferences to be drawn from histories so wonderful.

shock to the system is independent to a great degree of the loss of blood. If these immediate dangers are surmounted, the patient's subsequent history seems to be liable to considerable variation with reference to the period at which formidable symptoms reappear, though the symptoms themselves are very uniform in their character. The state of the uterus, too, differs in a way which greatly modifies our prognosis; the organ remaining in some instances comparatively soft and yielding, admitting of being indented by the finger, and consequently allowing of attempts at its replacement being made with a fair prospect of success; while in other cases it becomes at once small and firmly contracted, and bids defiance to every effort to rectify its position. I do not know how to account for these differences in the state of the womb, though their immediate cause must consist in the absence of, or at least in the very imperfect involution of the organ in one case, and the rapid and complete accomplishment of it in another.

Those cases where the uterus remains soft and flaccid, and capable of replacement, are, however, exceptions to the general rule, as might, indeed, be inferred from the rarity of the instances in which, after many days, or even after many hours, the accident has admitted of remedy. In the majority of instances the contraction of the uterus occurs very speedily, and is so firm that the inverted organ has sometimes been mistaken for the head of a second foetus, while the processes of involution usually go on as completely as in the womb when in its natural position. This fact is attested by the numerous preparations of chronic inversion of the womb, in which, as in that in the Museum of St. Bartholomew's Hospital, the organ is so small that the opening of the pouch which it forms would not admit anything larger than a quill, while its dense tissue seems at first scarcely compatible with the outpouring of so abundant a discharge of blood as that under which the patient sank.

In many instances hæmorrhage has continued to flow at short but uncertain intervals from the moment of the occurrence of the accident, but to this there are occasional exceptions. In the

case which came under my observation, a very slight occasional discharge of blood was all that occurred for several months after the patient's delivery; she having suckled her child for thirteen months. At the eleventh month, however, the ovaries resumed their function, and the menses were extremely profuse. On their next return the bleeding was still more abundant, and thirteen months after delivery the flooding was alarming from its quantity, and was intermingled with large coagula which were discharged without any suffering. Even before the hæmorrhage became profuse the patient suffered from ordinary leucorrhœal discharges, which afterwards continued in the intervals of menstruation. By degrees the intervals became shorter, the hæmorrhage more profuse, and the leucorrhœal discharge lost its character of a mucous secretion, and became more serous. At last, when well-nigh drained of all her blood, the red colour almost completely disappeared from the discharges, and for the last two or three months of her life there was a constant flow of serum, but the positive hæmorrhage was very small. A sense of bearing down, and the occasional appearance of the inverted womb externally on walking or any exertion, so long as the patient was able to follow her usual avocations, were her only other symptoms, and, indeed, the only ones which are common in these cases. There are, however, some instances in which the inverted womb, from hanging externally, has been exposed to injury, and become ulcerated; and others in which the violent constriction of the inverted body of the womb by the os uteri has produced gangrene of the organ.*

Such being the consequences which follow the inversion of the uterus during labour, it is obvious that they tend of necessity to a fatal issue, and that the question is not so much how, as how soon a case will terminate. Mr. Crosse,† whose industry has thrown so much light on many subjects connected with this accident, states, that in seventy-two out of one hundred and nine fatal

* Several references to this occurrence are given by Crosse, *op. cit.*, part ii. p. 111, Notes 104 and 105.

† *Op. cit.*, p. 170.

cases, death took place within a few hours, in eight within a week, and in six more within four weeks. The immediate danger, however, being surmounted, there follows during lactation an interval of comparative safety and of cessation of serious symptoms, which re-appear when suckling is over. It appears that of the remaining twenty-three patients only one died at the fifth month, and then, as the result of an operation which had an unsuccessful issue, one died at eight months, three at nine months, and the others at various periods of from one year to twenty years.

These latter cases of great prolongation of life, in spite of the persistence of inversion of the womb, lead us lastly to notice those rare instances in which life has not only continued for many years, but in which serious symptoms have been altogether absent. Of these the most remarkable history is that recorded by Boivin and Dugés,* of a woman who was brought to one of the hospitals at Paris six days after a labour in which her womb had become inverted. Repeated efforts were made by M. Dubois, as well as by Madame Boivin herself, to replace the womb, but without success, and no symptoms being at the time present, the patient returned into the country by diligence on the eighteenth day after her delivery. Nothing more was heard of her till five years afterwards, when she presented herself to Madame Boivin, with her uterus still inverted, though of smaller size than before. Some sense of dragging at the groins, a frequent desire to pass water when she was up and exerting herself, and a discharge of a reddish mucus recurring every fifteen or twenty days and lasting for a few hours, were the only symptoms from which she suffered. She was incommoded, however, by having grown enormously fat, and expressed anxiety at the non-appearance of her menses. Two cases are related by Lisfranc:† the one that of a woman who died at the age of seventy years, of inflammation of the lungs; and the other that of a person forty-eight years old, whose only uterine symptoms were slight leucorrhœa, and dragging sensation at the loins, and whose uterus, on her death from

* *Op. cit.*, vol. i. p. 245.

† *Op. cit.*, vol. ii. p. 379—383.

enteritis, was also found completely inverted. In neither of these cases, indeed, was there any satisfactory history of the manner in which the accident took place; but the existence of inversion at the examination after death, and the absence of symptoms of it during the lifetime of the patients, are both clearly substantiated.*

Stranger still than the above are cases in which the uterus is alleged to have spontaneously replaced itself. The possibility of the spontaneous replacement of a partial inversion of the womb during labour must be admitted, and can even be understood: an occurrence stated by Saxtorph† to have taken place in a patient whose uterus he endeavoured in vain to replace; and being thus compelled to leave the case to nature, the organ recovered in a few days its natural position. But there are other instances in which spontaneous replacement of the completely inverted womb is stated to have occurred many days, or even months or years, after delivery. It is difficult to know what opinion to form concerning these cases; in some the accuracy of the diagnosis appears very doubtful, and in others the details given are far too meagre to warrant any conclusion with reference to their real nature; while unquestionably no such exceptional occurrences should be allowed to influence our treatment of any case which may come under our care.‡

Questions of obstetric practice do not fall within the scope of these Lectures. I shall therefore say very little with reference to the management of these misplacements of the womb in their recent state, but shall pass almost at once to the consideration of the *diagnosis and treatment* of the accident in its chronic form.

* References to other similar cases are given by Meissner, *op. cit.*, vol. i. p. 743.

† *Gesammelte Schriften*, 8vo, Kopenhagen, 1804, p. 307.

‡ The most satisfactory of these cases is Dr. Thatcher's, referred to by Mr. Crosse, *op. cit.*, p. 176, note. But in this instance the uterus had resumed its proper position at the end of a month. The case related by Dailiez, *Sur le Renversement de la Matrice*, 8vo, Paris, 1803, p. 33, corresponds much more nearly with one of polypus than of inversion; and of Dr. Meig's two cases the former is very deficient in detail; while with reference to both there is a long period during which the patients were not under any one's observation; circumstances that must diminish their value. See Meig's Translation of Colombat, *Diseases of Women*, 8vo, Philadelphia, 1845, p. 182.

In the recent state the diagnosis of inversion can seldom be obscure. There are instances, indeed, in which it has been overlooked or mistaken, or in which the inverted uterus has even been torn away under the supposition that it was the placenta; but such errors imply a depth of ignorance and folly, upon which all rules and all experience would alike be wasted. There seem, however, to be cases where, some short time after the detachment of the placenta, the womb has become of its own accord partially inverted, or *depressed* at its fundus, and where, while much depression and some hæmorrhage have existed, there has neither been a tumour to be felt per vagina, nor disappearance of that which the uterus should form in the abdomen. This partial inversion, too, tends to increase, so that the depression of one day may amount (to borrow Mr. Crosse's terminology) to *introversion* on the next day, and to *complete inversion* on the third. I do not know that more is needed to preserve from this error than a knowledge of the possibility of falling into it, and of the consequent necessity of ascertaining in every instance where causeless depression and causeless bleeding follow the last stage of labour, not only that the uterine tumour still remains in the abdomen, but also that it retains its proper size and contour.

When the accident does occur before the detachment of the placenta, the whole weight of evidence is, I think, in favour of removing the placenta before endeavouring to return the womb; and the non-occurrence of serious bleeding in many instances of recent inversion of the womb after the separation of the placenta, strongly corroborates the accuracy of the views as to the source of hæmorrhage in labour, which, though so clearly explained by Dr. Simpson, have been much misunderstood and misrepresented.

There is some discrepancy between the directions given by different writers for the *replacement of the uterus when inverted* during labour; for while some practitioners recommend the endeavour to indent the fundus of the organ with the fingers, and thus to replace first that part which was first inverted, others advise that the womb should be grasped between the fingers, and

that while thus compressed as much as possible, it should be carried up through the os uteri or that part of the womb which represents it, and should be thus restored to its proper position. I imagine that these different rules imply the existence in the one case of the soft and flaccid condition of the womb; in the other, of a state of comparative firmness and contraction; and that according as the former or the latter state is present, the first or second kind of manipulation may be advantageously employed. In the great majority of instances where the uterus has been replaced after the lapse of some considerable time, this lax state of the uterus, which must greatly facilitate the endeavour, appears to have still persisted. Thus in a case related by Dr. Borggreve, and referred to by Kiwisch,* continued pressure by means of a long pessary, fastened externally with a T bandage, reduced the uterus in three days; its employment having been commenced on the fourth day after delivery. A similar contrivance was successful in Dr. Smart's case,† the uterus having already been inverted three weeks when it was first employed. In Dr. Belcombe's case,‡ the womb was found twelve weeks after delivery a large spherical pouch; and in Dr. Miller's patient,§ at the end of three months, it likewise admitted readily the introduction of two fingers into its cavity. Such, too, must have been the state of the womb in the two cases|| (if we admit them as not too wonderful for credence) in which a fall upon the nates replaced at once the womb, though inverted in the one case for six months, and in the other for eight years.

The only case with which I am acquainted of the reposition of a chronic inversion of the uterus, where the organ had already shrunk to very small dimensions, is the remarkable case related by Dr. Barrier,¶ in which he reduced it under the influence of

* *Op. cit.*, vol. i. p. 251, from *Med. Zeitung*, 1841, No. xxiii.

† *American Journal of Med. Science*, 1835, vol. xvi. p. 81.

‡ *Medical Gazette*, 1831, vol. vii. p. 783.

§ *Ed. Monthly Journal*, Dec. 1851.

|| Reported by Dailliez, *Observations* 33 and 34, pp. 105 and 107. The second and more remarkable of the two cases was observed by Baudelocque himself.

¶ *Archives Gén. de Médecine*, May, 1852, p. 100.

chloroform after the lapse of fifteen months. Neither in this case, nor in that of Dr. Miller, does it seem to me that the chloroform exerted any special influence in facilitating the reduction of the womb beyond securing the obvious advantage of keeping the patient quiet during the attempt. In my own unsuccessful case, efforts at the return of the womb were made as well under the influence of chloroform as without it, but with the same result. Since, however, it is clear from the cases already referred to that we can never predicate in any instance the absolute irreducibility of the uterus, it is obviously our duty always to make the attempt, whatever may have been the length of time which has elapsed since the occurrence of the accident.

It is to be feared, however, that in by far the greater number of instances, the inverted womb, if it could not be replaced at the moment when its malposition occurred, will remain irreducible, and will entail on the patient all the perils which you know almost always follow that accident. Unfortunately, too, the only means with which we are acquainted of warding off these dangers, consist in the performance of an operation itself attended by very serious hazards.

The observation of cases in which now and then women had survived the tearing away of the uterus by some ignorant persons during labour; the occasional occurrence of instances where the inverted uterus had sloughed away, and the patient had recovered from the accident, and the overbold surgery of the sixteenth and seventeenth centuries, to which alike the facts and the fables of Rousset* largely contributed, had familiarized practitioners with the idea of extirpating the uterus when irreducibly prolapsed or inverted. It was not, however, until the end of the last century, that the removal of the inverted uterus began to be admitted as one of the legitimate operations of surgery, and that the question of its indications and of the best mode of its performance were carefully considered.

In the majority of instances the indications for the removal of

* *Fœtus Vivi ex Matre Casura*, &c., 8vo, Basileæ, 1592. *Sectio Quarta*, pp. 100—108.

the inverted uterus have been furnished by profuse hæmorrhage and discharge exhausting the patient's strength and threatening her life; though in a few instances, as in that where Mr. Chevalier* removed the organ, the operation was not called for by actual danger to the patient's life, but by the extreme discomfort which was produced by the tumour hanging between the patient's thighs, and exposed to all kinds of external injury. The uterus has besides been removed in a few instances, either immediately after delivery, or within a few days subsequently; but, with the exception of one instance† in which the organ had already passed into a state of gangrene, the operation at this early period has been due either to ignorance, or at least to errors in diagnosis, and has been always dangerous, and usually fatal.

If we confine our attention for the present to cases where the inversion of the uterus succeeded to parturition, we shall find that thirty-six out of fifty cases of extirpation of the womb had a favourable result; twelve issued in the patient's death; and in two, though the patient survived, yet it was found necessary to abandon the operation.‡

The following table shows the results obtained by the different modes of performing the operation.

		Recovered.	Died.	Operation abandoned.
Uterus removed by ligature in	38	28	8	2
" " knife . .	4	3	1	
" " { knife and }	8	5	3	
{ ligature }				
	50	36	12	2

* Reported by Dr. Merriman, in his *Synopsis of Difficult Parturition*, 4th ed., London, 1826, 8vo, p. 306. I may observe that the last reported case of extirpation of the inverted uterus of many years' standing and externally prolapsed, reported by Dr. Geddings, of Charleston, in America, at p. 211 of vol. xxi. of Ranking's *Retrospect*, warrants great doubts as to its having been an inverted uterus at all. The mass removed was solid, and with no trace of a cavity. I have not included it in the cases which I have referred to. I have, however, included Baxter's case, *Med. Physical Journal*, vol. xxv. p. 210, though the objections which apply to it are nearly, if not quite, as cogent.

† Faivre, *Journal de Médecine*, August, 1786, p. 201.

‡ References to thirty-six of the above cases are given in Mr. Gregory Forbes's

The number of instances in which the ligature was employed, is so much greater than of those in which any other operative proceeding was had recourse to, as to preclude any fair comparison of their results, and I am unable to contribute anything from my own experience towards a solution of the question. It may, however, be worth notice that in no one of the four cases of excision of the uterus did any considerable bleeding occur, and in the instance which terminated fatally, death was occasioned by peritonitis. The dread of hæmorrhage which so long deterred practitioners from excising polypi, has been learnt by experience to be in great measure an exaggerated fear; while the risk of inflammation of the womb from the inclusion of some of its fibres with the ligature has been found to be very real. It is probably deserving of consideration whether, when the inversion is of long standing, the uterus small and firmly contracted, and the diameter of the peritoneal pouch consequently scarcely larger than a crowquill, while the sensibility of the serous membrane has been lessened by the long continued change in its relations, the risk attending the excision would

excellent paper on Inversion of the Uterus in vol. xxxv. of the *Medico-Chirurgical Transactions*. The remainder are :—

Bernhard, *Lucina*, vol. i. p. 401.

Staub, *Schweizer, Zeitschr. f. Natur und Heilkunde*, vol. iii. No. 1.

Kuttler, *Oester. Jahrb.*, vol. xi. No. 1.

Portal, *Il Filiatre Sebezio*, Feb., 1841.

Michalowsky, *Journal de la Soc. de Méd. de Montpellier*, Mai 1845.

Hublier, *Bulletin de l'Académie de Médecine*, 1848, No. 41.

The above references to cases, all of which were successful, are given by Breslau, in his dissertation *De totius uteri extirpatione*, 4to, Monachii, 1852.

Besides this, there are successful, and not mentioned by Forbes or Breslau :—

Harrison, *London Med. Gazette*, April, 1840, p. 151.

Thatcher, related by Crosse, *op. cit.* p. 57. The inversion took place in this case after the expulsion of a mass of uterine hydatids.

Teale, *Med. Times and Gazette*, Sept. 1, 1855.

Oldham, *Guy's Hosp. Reports*, 3rd Series, vol. i. p. 171.

There are, besides, four unsuccessful cases in addition to those referred to by Mr. Forbes, namely :—

Symonds, *Medical Gazette*, Nov., 1830.

Meerholdt, in Salomon's dissertation, *De uteri inversione*, &c., Dorpat, 1836, referred to by Breslau, p. 40, No. 49 in his table.

Coates, *Association Medical Journal*, July, 1855.

Covelier, *Presse Médicale*, and Schmidt, *Jahrbücher*, July, 1852, p. 182.

not be smaller than that associated with the ligature of the uterus.

As might be anticipated, the result of the operation is to a very considerable extent modified by the period at which it is undertaken. If performed soon after delivery, while the womb is still comparatively large and vascular, and its sensibilities acute, the prospects of success are smaller than if the misplacement had become a chronic evil before any kind of interference was resorted to.

Table showing the period after delivery at which the inverted uterus was extirpated in forty-six cases.

	Patients recovered.	Patients died.	Total.
Under 1 month . . .	4	3	7
Between 1 and 2 months	3	...	3
" 2 — 6 "	3	3	6
" 6 — 12 "	2	3	5
" 12 — 18 "	5	...	5
" 18 — 2 years	1	...	1
" 2 — 3 "	4	...	4
" 3 — 4 "	2	...	2
" 4 — 5 "	4	...	4
" 5 — 6 "	2	...	2
" 6 — 7 "	2	...	2
After 12 years . . .	1	...	1
" 14 " . . .	...	1	1
" 15 " . . .	...	1	1
" many " . . .	2	...	2
	35	11	46

It is, perhaps, deserving of mention, that in one of the cases where the operation was successfully performed within a month after the patient's delivery, the uterus was in a state of gangrene, and that in two others it lay beyond the external parts, a position, which I need not remind you, considerably lessens its sensibility. The remaining case was one in which the operation was performed by an ignorant midwife with a razor, and is an illustration of the wonderful power of repair, even of most fearful injuries, which nature exerts occasionally, rather than an example which can serve for our guidance in practice.

In some of the fatal cases put on record, and probably also in

others which have not been published, inversion of the uterus has been mistaken for polypus, and the error has only been discovered after the supervention of formidable symptoms of peritoneal inflammation, or after the death of the patient. It hence becomes a matter of considerable importance to ascertain the nature of the case before any operation is attempted, lest it should unexpectedly appear that the ailment, instead of being one the removal of which is attended by but moderate risk, was in reality one the cure of which is unavoidably accompanied by most imminent hazard.

A want of caution on the part of the practitioner is obvious in most instances of inverted uterus, in which an error of diagnosis has been committed. But still *the diagnosis* has now and then been rendered extremely difficult by the firm contraction of the os uteri around the inverted body of the womb, which is thereby compressed so as to resemble the pedicle of a growth proceeding from within the uterine cavity, and thus closely to simulate a polypus. The history of the patient in such a case, even if accurately ascertained, is not absolutely conclusive, inasmuch as uterine polypus may complicate pregnancy, and may both give rise to hæmorrhage after delivery, and also to a tumour felt on vaginal examination. The comparative sensibility of a polypus and of the inverted womb does not furnish any trustworthy criterion; for the sensibility of that organ is in many instances very low, and was so in the case which came under my observation; while it may further be added, that there is no such difference between the appearance of the tumours as could be relied on in forming a decision.

Mr. Arnott suggested to me some years ago a means of distinguishing between the two, which appears to me quite worthy of being borne in mind. Let the finger be introduced into the rectum, and carried up as high as possible. On turning it round, if the uterus be inverted, the finger will have been carried above it, and will easily ascertain the absence of the organ from its natural situation in the pelvis. If, on the other hand, the vaginal tumour is a polypus, the uterus will be found probably

enlarged, and at any rate occupying its proper position. The uterine sound furnishes us with another valuable aid in doubtful cases. If a polypus is present, the uterine cavity will be found enlarged, so that the sound will pass further than natural, and a sense of weight will also in all probability be experienced ; and by these two means of examination combined, I believe that in all cases of inverted uterus after labour, an erroneous diagnosis may be avoided.

It now remains for me to offer a few suggestions with reference to the only means by which the almost inevitable results of irreducible inversion of the womb can with certainty be obviated ; and these consist, as you know, in the *extirpation of the organ*, either by the knife or the ligature. It is almost superfluous to say that, inasmuch as there are some few instances on record in which inversion of the womb has not been followed by the serious results to which it usually gives rise, so nothing but most obvious danger to the patient's life will justify the performance of an operation so hazardous as the extirpation of the womb. But further, the occurrence of severe hæmorrhage, and the apprehension of its increase at each return, will not suffice to render an operation expedient within a few months after delivery, since the chances of the patient's recovery appear to increase in proportion as the accident is of long standing. Since also in some instances in which the function of the ovaries has been kept in abeyance by lactation, but little loss of blood has occurred for several months after delivery, it would seem desirable that every woman suffering from irreducible inversion of the uterus should be encouraged to suckle her child, in order that time might be gained for the occurrence of as complete an involution of the uterus as possible before its removal is attempted. When the frequency of the return of the hæmorrhage, or the abundance of the losses of blood, has shown the necessity of interference, it yet is not desirable to select the time when hæmorrhage is going on for the operation, inasmuch as such times usually correspond with a menstrual period, and the uterine sensibility is generally greatest at those seasons. In

spite of the general propriety of this rule, however, it may be borne in mind that if hæmorrhage at any such period should threaten life, and should not be restrained by styptics or by the plug, a ligature may be applied as a temporary expedient with great probability of the loss of blood being thereby restrained,* even though the ligature should be removed some hours afterwards.

In the use of the ligature something seems to depend on the kind of material employed. Both silk and whipcord appear to irritate considerably ; and Dr. Johnson, of Dublin, who has had greater success in this operation than any one else, prefers a ligature of well annealed silver wire and dentist's silk twisted together, as being more readily loosened if too tight, and as causing less irritation than ligatures of other kinds. It has sometimes been attempted to obviate the risk of inflammation by applying the ligature at first so tightly around the inverted womb as at once and completely to strangulate it. This proceeding, however, whilst it causes intense suffering, does not appear to have the desired effect ; and a preferable plan seems to be that of applying it comparatively loosely, and of tightening it gradually day by day as the patient is able to bear it. The great prostration and severe pain which usually attend the first application of the ligature would probably be obviated in great measure by the administration of chloroform ; the subsequent supervention of inflammatory symptoms seems to require the immediate slackening of the ligature, and may necessitate its complete removal. After the ligature has about half effected the division of the part, there appears to be no sort of objection to the completion of the operation by the knife or scissors ; but the double operation of applying a tight ligature, and immediately excising the womb, does not seem to be as safe a proceeding as either the ligature or the knife alone. I have already referred to the grounds which in my opinion render it

* This result occurred in Dr. Johnson's second case, with the effect of checking the bleeding, five weeks before the organ was actually extirpated. See his paper in vol. iii. of *Dublin Hospital Reports*.

doubtful whether simple excision of the womb will not be found in some circumstances the safest as well as the most expeditious operation. As these grounds, however, are merely theoretical, the subject does not call now for any further notice.

A few words must still be said about those cases in which the *presence of a polypus in the cavity of the womb* has led to the inversion of the organ; an accident which is unquestionably very much rarer than the inversion of the womb after labour. The large size of the outgrowth, the presence of more tumours than one, together with the origin of the polypus from the fundus of the womb, are the conditions which have been met with in the majority of instances where this accident has happened. These, however, are by no means of constant occurrence; for a very small tumour has sufficed to invert the womb,* while the insertion of the pedicle of the polypus into the fundus of the uterus is common to the greater number of these growths; and the large size of the tumour or the presence of several tumours are by no means unusual, without any disposition to inversion of the womb. The accident seems to have taken place with polypi of all descriptions; with soft, malignant, or pseudo-malignant tumours, as well as with those of a fibrous texture, or which might be supposed to be actual outgrowths of uterine tissue; and I am not aware that in any instance the observation has been made of any peculiar relation subsisting between the substance of the womb and that of the tumour. In all the instances, I believe, in which any definite history has been given of the patient's previous condition, violent expulsive pains are stated to have preceded the inversion of the womb; but these, I need scarcely say, are too frequent a concomitant of the escape of a polypus into the vagina to have much diagnostic value.

In other respects the symptoms attendant upon inversion of

* Of which a remarkable illustration is given by Mr. Crosse, *op. cit.*, p. 47 and plate viii., from a preparation in the Museum of the Royal College of Surgeons in Dublin; the tumour which had produced complete inversion of the womb very little exceeding a chestnut in size.

the uterus complicating polypus present nothing at all peculiar—leucorrhœa, menorrhagia, and exhausting hæmorrhages occurring in cases of ordinary fibrous tumour or polypus as frequently, and to as great extent, while the womb retains its proper position, as when the organ is inverted.

In a practical point of view that which it behoves us to bear in mind is, *first*, the possibility of this accident occurring in any case of polypus growing from the cavity of the womb, and the especial reason for suspecting it when any considerable or long-continued expulsive efforts have preceded the escape of the polypus into the vagina: *second*, the expediency, before tying or excising any polypus which either is very large, or the development of which has been accompanied by such symptoms, of ascertaining by means of the sound the exact dimensions of the uterine cavity, that we may not unwittingly divide or tie the substance of the womb instead of the pedicle of the tumour. If it be ascertained that the womb is inverted, I should imagine the proper course would be to excise the polypus sufficiently low down to avoid all risk of seriously wounding the uterus, and then to endeavour to replace the organ: an attempt the impracticability of which seems to have not infrequently been assumed in these cases on insufficient grounds.

Lastly, it must be borne in mind that the uterus may be inverted by the tractions made at a polypus in the endeavour to drag it down sufficiently low for its excision. I do not think, indeed, that there is much risk of this in the case of polypi of ordinary size; but the cases related by M. Amussat, and one still more recent which occurred in the practice of Mr. Johnson, of Norwich,* show that when the tumour is of considerable size this accident is very likely to occur.

A word or two, before concluding this Lecture, may be added concerning a form of uterine misplacement of no practical moment, except as sometimes helping to throw light on the nature of a patient's ailments, otherwise perhaps obscure. The ancients conceived, as probably you know, that the peculiar

* See Crosse, *op. cit.*, p. 52.

sensation of choking, the *globus hystericus*, from which women often suffer, was due to a positive *ascent of the womb* from its natural situation in the pelvis. In order to expedite its return to its proper place, they were accustomed by a quaint combination of reward and punishment to employ aromatic fumigations to the vulva, while foetid gums and other ill-savoured medicines were given by the mouth. This practice, with many other absurdities of bygone days, is exploded, but a vestige of the theory still remains behind, for it is alleged by some continental writers* that contractions of the uterine ligaments, or as some say of the peritoneum, raise the womb from its proper situation, and thus supply a positive mechanical cause for the unpleasant sensations about the pelvis of which hysterical patients frequently complain. For my own part I neither admit the explanation, nor do I believe the fact. It is also said that the greater difficulty with which the os uteri is reached in the aged than during the years of sexual vigour, and the narrowing of the upper part of the vagina which is then observed, are due to an actual elevation of the organ in advancing years. This, however, again appears to me in the highest degree problematical. We know that the uterus wastes, that the projection of the cervix into the vagina also disappears from the same cause, that the vagina, too, becomes atrophied, and that if the uterus, owing to the weakening of its supports, do not sink down, and so distend the vagina, the calibre of that canal will become much narrower than it was before. I am quite at a loss to understand what causes operating in old age can tend really to raise the uterus higher than it was before; nor in fact am I convinced that such an elevation of the organ actually takes place.

But though ascent of the womb does not call for notice as a condition of itself producing any definite symptoms, it is yet of importance to bear in mind the different circumstances in which we are likely to find the organ occupying a higher situation than usual.

1st. It is a physiological attendant upon pregnancy, from

* Busch, *Geschlechtsleben des Weibes*, vol. iii. p. 473.

about the fourth to the eighth month, is especially marked in first pregnancies, is sometimes so considerable as to render it a matter of extreme difficulty to reach the os uteri. With moderate attention, however, to the patient's history, and consideration of all the circumstances of her case, the peculiarities presented by the pregnant os uteri will seldom fail to keep the practitioner from error.

2nd. When any considerable degree of pelvic contraction exists, the want of space often obliges both the uterus and bladder to remain above the pelvic brim, a circumstance to which most of the difficulty of the operation of craniotomy is very frequently due.

3rd. In cases of inflammation of the pelvic cellular tissue, or of that between the folds of the broad ligament, the uterus is often found very high up, so that its orifice is reached with difficulty. This change in the position of the organ, too, is not necessarily due to the formation of a tumour lower down in the pelvic cavity, forcing it above its natural situation, though it may of course be produced in that way; but it may depend on a positive dragging of the womb upwards by the inflamed tissues.

4th. In a large number of instances of ovarian dropsy, the cyst, as it rises out of the pelvis, draws the uterus with it sometimes even considerably above its natural position. In cases where a question arises as to whether an accumulation of fluid in the abdominal cavity is due to ascites or to ovarian dropsy, the relations of the uterus often assist us in arriving at a correct conclusion, for the organ which is usually drawn upwards in ovarian dropsy is generally depressed below its ordinary situation in cases of ascites. More frequently it happens that doubt is entertained as to the nature of a non-fluctuating tumour, concerning which it is uncertain whether it is uterine or ovarian. Any considerable elevation of the uterus is much more frequently due to degeneration of the ovary than to tumour of the womb.

5th, and lastly. In a few instances, fibrous tumours of the uterus as they increase in size raise the organ more and more out

of reach. Nothing, indeed, is more common in cases where the uterus is the seat of several fibrous tumours, some of which have attained to a considerable size, than to find the organ so much deformed that the os becomes situated high up behind one or other side of the ramus of the pubis. But besides those cases in which the firm irregular outgrowths felt per vaginam leave no room for uncertainty, there are a few exceptional instances in which a single fibrous tumour in the uterine wall, without producing any deformity of the organ appreciable per vaginam, raises it in the progress of its development high out of the pelvic cavity. In this process, however, the greatly elongated cervix uteri scarcely participates in the growth of the body of the organ, but becomes mechanically stretched till it attains sometimes the length of several inches.* As a result of this the lips of the os uteri become extremely thin, or disappear almost entirely, leaving the os a funnel-shaped entrance, with almost membranous margins, to the elongated and narrow cervical canal. When drawn upwards by the enlarged ovary, the traction is exercised on the body not on the neck of the womb, and hence produces no change in the character of the lips or os uteri.

With these hints, not without their use perhaps in the diagnosis of uterine affections, we may take leave of the subject of malpositions of the womb, and must at the next Lecture commence the study of another and most important class of its diseases.

* As in the very remarkable case described and delineated by Professor Walter, of Dorpat, in which the cervix was two inches and three quarters long, and scarcely any indication of the uterine lips was perceptible. See p. 10 of his Essay, *Ueber Fibröse Körper der Gebärmutter*, 4to, Dorpat, 1852.

LECTURE XIV.

UTERINE TUMOURS AND OUTGROWTHS.

Their occurrence connected with tendency of uterus to hypertrophy generally.

Outgrowths of the mucous membrane, or MUCOUS POLYPI; their simplest form.

FIBRO-CELLULAR POLYPI. GLANDULAR POLYPI from hypertrophy of uterine follicles.

Cystic enlargement of follicles of cervix, or MUCOUS CYSTS OF THE UTERUS.

Symptoms of these affections: nature and source of the hæmorrhage they occasion.

Diagnosis. Treatment.

FIBRINOUS POLYPUS, its nature; analogy to other chronic effusions of blood. Note on some other alleged varieties of polypus.

IN the course of the foregoing Lectures I have referred over and over again, with an iteration that can scarcely have failed of being wearisome, to the ready increase of the womb under the influence of very various exciting causes. We have seen that inflammation going on to the production of its ordinary consequences—suppuration, or the effusion of lymph, is of very rare occurrence. Abscess of the womb is one of those accidents so uncommon, that when met with it seldom fails to be recorded among what the old writers used to term *CURIOSA MEDICA*; and the effusion of lymph into the tissue of the organ has been assumed in accordance with certain physiological or pathological hypotheses rather than actually demonstrated.

It is indeed scarcely ever, except after labour or miscarriage, when the tissue of the womb passes physiologically through changes such as those which inflammation tends to work, that that diseased process manifests itself in its acute forms, or with dangerous severity, while, even then, the serous investment of the organ, or the lining membrane of its veins, is generally the part which shows marks of the most serious mischief. Often, too, the signs of inflammation appearing at these times, turn out to be symptomatic less of affection of the womb itself than of

its appendages or of the cellular tissue in its vicinity, or connecting together the different pelvic viscera. At the same time, however, we find that the causes which elsewhere might issue in inflammation produce in the case of the womb its overgrowth. It increases from that frequent afflux of blood towards it which produces many forms of menstrual disorder ; it remains permanently increased from deficient involution after labour ; it enlarges, if flexed or misplaced, and its prolapsus causes it in many instances to attain to more than double its ordinary size.

But not only is hypertrophy of the womb more frequent than the hypertrophy of any other organ, but each of its component tissues is liable to a similar overgrowth—not regular indeed, and equable, but in parts, here and there, constituting tumours and outgrowths, which are met with in this oftener than in any other part ; and of which frequency the physiological peculiarities of the womb furnish the only explanation. The mucous membrane of the uterine cavity undergoes, as we have already seen, an occasional hypertrophy in some menstrual disorders, but becomes eventually cast off in accordance with the laws which regulate its development in a state of health and under the influence of pregnancy. But the mucous membrane of the cervix also sometimes becomes hypertrophied, and such hypertrophies are not deciduous, but assume the form either of a distinct fold at the orifice of the womb,* or more frequently of distinct small pendulous outgrowths. Now and then, the admixture of a larger quantity of cellular tissue than usual gives to these growths a more considerable size than they attain to when composed exclusively of mucous membrane. Sometimes the same process of overgrowth affects the cellular structure of the neck of the womb, and then a peculiar form of outgrowth is produced, termed the glandular or cellular polypus of the cervix uteri. If one of these follicles alone increases at the expense of the others, and without a corresponding hypertrophy of the cellular structure or mucous membrane, there are then produced those cysts

* As well delineated by Dr. Tyler Smith in pl. ix. of his *Essay in the Med. Chir. Transactions*, vol. xxxv.

of the neck of the womb whose nature and origin were once so little understood. Lastly, if the same process involves the uterine substance itself, we then meet with the so-called fibrous tumours of the womb, which, identical with it in their intimate structure, differ only in this, that they are not developed in accordance with the general contour of the organ in which they arise; but, springing from various centres, grow with no symmetry towards its outer or its inner surface, and produce symptoms which vary according to their seat and the vigour of their growth.

With reference to these and other varieties of growths from the womb, it is not altogether without importance to observe that the time of their appearance is just that at which all the physiological changes in the organ go on with the greatest activity, and that they are rarely met with either in the season of decrepitude or of early youth. The same fact too, holds good to a great extent with reference to another great class of ailments of the uterus; those namely of a malignant character. These, too, occur chiefly in the season of sexual activity, and seem to be connected, as in the case of the female breast, with the wide fluctuations in growth and in activity, which succeed each other in those parts within very brief intervals.

Having thus thrown out a suggestion which may perhaps explain in some degree the singular liability of the womb to various tumours and outgrowths, I propose in succession to examine each kind, beginning with those of simplest character, namely outgrowths from the uterine mucous membrane; the *mucous polypi* of most writers on the diseases of women.

These generally appear as small outgrowths from the folds of the so-called *arbor vitæ*, varying from a third to half an inch in length by about three lines in thickness; the pedicle by which they are connected with the mucous membrane being generally exceedingly slender, though at the same time very short. It would seem as if they were originally duplicatures of the mucous membrane of equal thickness throughout, and as if the gradual constriction of their pedicle were the process by which nature gets

rid of them, just by the same means, in short, by which the loose cartilages in the knee-joint are by degrees detached from their connexion with the synovial membrane whence they originally sprang. They are usually of a bright rose tint, abundantly supplied with a delicate net-work of vessels, and consist exclusively of mucous membrane with a very small admixture of cellular tissue. The seat of these little bodies is nearly always the cervical canal, from any part of which they may arise, though they are usually nearer the external than the internal os uteri. Now and then, however, I have found a single growth of this kind in the uterine cavity, but quite at its lower part, though I apprehend there is no reason why they should not arise from any part of the uterine mucous membrane. Though generally pediculated, as just now described, they are now and then sessile, of a flatter form, and adherent along the whole of one of their surfaces to the mucous membrane. Occasionally, too, they do not assume the form of distinct outgrowths, but appear like hypertrophied folds of the arbor vitæ, bearing the same relation to the walls of the cervix as the attached carneæ columnæ do to the parietes of the heart.

Sometimes these growths are solitary, but it is at least as frequent for two or three of them to be found in the same patient; they have a disposition also to be reproduced; or at least successive growths form, so that it is not unusual for a patient from whom they have once been removed to require a repetition of the operation after the lapse of a few months. I have known them coexist with fibrous tumours of the uterus, but do not imagine that this was the result of more than a mere coincidence, and have never seen reason for regarding them as the precursors of malignant disease, though Dr. Montgomery, of Dublin,* believes this not infrequently to be so in the aged.

These outgrowths, which are simple excrescences from the mucous membrane, never exceed the very small dimensions which I have just specified. Sometimes, however, a larger quan-

* In a very valuable paper on "Polypus of the Uterus" in the *Dublin Journal of Medical Science* for August, 1846.

tion of cellular tissue enters into their composition, and they then acquire a much larger size, and hang down beyond the os uteri into the vagina. They are often the size of a small fig, of a flattened form, and are found to be made up of *fibro-cellular tissue*, having an investment of cervical mucous membrane.

More frequent than the latter, are *polypi of a more complex structure*, into the formation of which there enter not merely the mucous membrane of the cervical canal or its hypertrophied fibro-cellular tissue, but also the large mucous follicles of the cervix. These polypi assume different forms, being sometimes pediculated, and the pedicle is occasionally of considerable length, at other times appearing as continuous outgrowths from the inner surface of one or other uterine lip, most commonly, I think, from the anterior. On dividing them, their most striking peculiarity is at once seen, for they are found to contain a large quantity of tenacious, transparent, albuminous matter, precisely similar to that which is secreted by the Nabothian glands. Sometimes, when the growth is still small, vesicles varying from the size of a pea to that of a kidney-bean, filled with this albuminous matter, compose the greater bulk of the tumour, their walls still partially transparent, but readily distinguishable beneath the delicate mucous membrane with which the whole is invested. In other instances, however, and generally whenever the bigness of the growth exceeds the size of the first joint of the thumb, the vesicles are not so distinct, though the structure is equally characteristic. In the midst of the succulent fibro-cellular tissue which enters into the composition of the tumour, there are numerous canals, whose walls are of a denser structure, arranged longitudinally, side by side, some of them communicating with each other towards the pedicle, but not by any cross branches. These canals are all directed towards the surface of the tumour, where some of them terminate in blind pouches. Others end in openings mostly of an oval form, and invariably smaller than the calibre of the tube itself. Their length is not quite uniform, and hence it results that the tumour has a peculiar, uneven, almost lobulated surface, closely re-

sembling in this respect the appearance of a hypertrophied tonsil. They are filled with the same albuminous matter as in the smaller outgrowths is contained in the vesicles I mentioned, and the origin of both appears to be the same, namely the mucous follicles of the neck of the womb. The long pedicle with which these growths are sometimes furnished* does not contain any of the hypertrophied follicles, but is composed entirely of fibro-cellular tissue. Usually, however, the pedicle is very short, and the point of origin of the growth low down in the cervical canal. Though freely supplied with vessels, these growths do not in general present any considerable vascularity of the surface, which may be stated on the authority of Virchow,† to be composed of very dense cellular tissue, covered by a thick layer of tessellated epithelium.

Lastly, in connexion with this class of ailments, may be mentioned the occasional *enlargement of the follicles of the cervix uteri*, unconnected with any outgrowth of its proper tissue, or any hypertrophy of its mucous membrane, but assuming the form of *cysts* whose development takes place at the expense of the uterine substance. In examining the uterus after death, it is by no means unusual to observe several vesicles of the size of a pea imbedded between the folds of the arbor vitæ, but scarcely, if at all, projecting beyond the level of the mucous membrane. This size, however, may be greatly exceeded. In the uterus of a woman, aged twenty-nine years, which presented no other appearance of disease, all the Nabothian glands were much enlarged, and the whole cervical canal was filled with their secretion : while at the upper part of the cervix uteri was one of these cysts as large as a kidney bean, distended with albuminous matter, and having by its increase produced the absorption of almost the whole of

* See Boivin et Dugés, *Maladies de l'Uterus*, &c., Atlas, pl. xvii. fig. 2, and pl. xix. fig. 2

† In the *Archiv fur Pathol. Anatomie und Physiologie*, vol. vii. 1854, p. 164, and plate ii. figs. 5 and 6. A very good description of the general characters of this kind of polypus and a diagram of its structure were given by Dr. Oldham in *Guy's Hospital Reports*, 2nd series, vol. ii. It has also been well described by Huguier in the *Mémoires de la Société de Chirurgie de Paris*, vol. i. 1847, p. 35.

the uterine wall, which was scarcely a line in thickness. The cyst had produced a degree of bulging outwardly of the attenuated uterine wall, such as must have been obvious during life, and by which I believe that, on one or two occasions, I have recognised this affection, which might, but for other symptoms, be taken for a solid tumour of the neck of the womb.*

Though I have met with many more cases in practice, yet I have preserved notes of only thirteen instances of these varieties of uterine polypi; a circumstance readily explicable by the speedy and complete removal of the ailment by a very slight and simple operation. Of the thirteen cases, all but two occurred in married women, of whom seven had given birth to children at the full period, one had aborted several times, and three had never been pregnant. The age of the youngest patient was twenty-three, that of the oldest fifty-two; and the average age of all was thirty-nine years. The *symptoms* which induced the patients to seek for medical aid had existed for periods varying from three months to four years; and were in every instance very similar in kind, though varying greatly in degree. Either leucorrhœal discharge, or hæmorrhage, or both, existed; to which bearing-down pains were sometimes, though by no means constantly, superadded.

Once or twice I have accidentally discovered small polypi in cases where they had produced no symptoms whatever. This, however, is unusual, for hæmorrhage is very generally present, though its amount seems to be in great measure dependent on the relation the polypi bear to the cervical canal; being much more considerable if the growth is enclosed within the lips of the os uteri, than if it projects beyond them and hangs down into the vagina. This, indeed, is what might be expected beforehand, and it serves to explain the history which patients sometimes relate of themselves, that the hæmorrhage which at one time had been profuse has at length greatly diminished, or even

* An extremely elaborate paper on this subject, with several illustrative drawings, has been published by M. Huguier, in the first volume of the *Mémoires de la Société de Chirurgie*, pp. 241—295, and plates i.—iii. The other portions of this Essay will call for notice hereafter.

altogether ceased. The influence of these small polypi in producing uterine irritation is sometimes exemplified by their giving rise to considerable enlargement of the neck of the womb, and a degree of hardness consequent on engorgement of the part from the considerable afflux of blood thither ; a condition which may lead the practitioner, unless on his guard, to overlook the real nature of the ailment, and to suppose that he has to do with hypertrophy and induration, the result of some bygone inflammation of the neck of the womb. This same fact also explains why it is that a comparatively large polypus hanging down into the vagina may be unaccompanied with bleeding, while an extremely small outgrowth still included within the neck of the womb may occasion very formidable hæmorrhage.

These simple facts point, I believe, to the solution of a much mooted question as to the source of the hæmorrhage in these and other varieties of uterine polypi and tumours. The growths are themselves well supplied with vessels ; if wounded, they bleed ; if excised, the hæmorrhage which takes place from their pedicle is sometimes considerable, has even been known to prove dangerous ; but yet all evidence goes to prove that it is rather from the womb itself than from the outgrowth that the principal bleeding flows, and that the hæmorrhage is proportionate, less to the size of the outgrowth than to the intimacy of the relation between it and the womb. Of this I saw some years ago a very remarkable exemplification. A woman came under my care who for three years had suffered from very profuse hæmorrhages which had ceased without known cause for three months before I saw her. The non-appearance of the menses for the same period did not engage my attention as it ought to have done ; and I accordingly excised a fibrous polypus the size of a small hen's egg, which grew by a short pedicle from the inside of the cervix uteri. Very profuse bleeding followed the operation, but no other untoward symptom ; and within six months more the patient was confined at the full term of pregnancy. I do not relate the case now for the sake of the moral to be drawn from it with reference to the absolute

necessity of care in your diagnosis, though in this respect it comments on itself, but because it illustrates exceedingly well the source whence the most abundant hæmorrhage flows. For three years the polypus had irritated the womb, and blood had been abundantly poured out. Pregnancy took place, there was increased flow of blood towards the part; the polypus must have gained rather than lost in vascularity, but no bleeding took place. The uterine cavity was now lined with decidua, and its cervical canal occupied by the mucous plug poured out from the Nabothian glands, and thus sheltered from irritation the hæmorrhage from its surface ceased, and leucorrhœa alone continued the evidence of the presence of the tumour.

The structure of the polypus has, however, something to do with the nature of the symptoms, with the occurrence, and still more with the amount of the hæmorrhage. Those polypi which present the compound structure due to enlargement of the Nabothian glands, are always associated with profuse leucorrhœa, a circumstance easily explicable if we bear in mind that the formation of the outgrowth is associated with a state of hypertrophy and over-activity of the whole secreting apparatus of the neck of the womb. Their vascularity being less than that of the small mucous polypi, they are also more frequently unassociated with bleeding, while, as might be expected, the hæmorrhage is usually absent when they assume the form of outgrowths from the inner surface of one or other uterine lip, since in that case the cervical canal escapes almost entirely from direct irritation.

I do not know whether these growths have any special influence unfavourable to conception, though there is no doubt but that the very nature of the symptoms to which they give rise is of a kind to lessen the probabilities of a woman becoming pregnant. I once excised a polypus, composed of enlarged Nabothian glands, of the size of a sugared almond, from the anterior lip of the uterus of a young woman who had lived for more than eighteen months in sterile marriage, but who became pregnant within a month afterwards, and was delivered of a

living child at the full period. Here, however, the relations of the tumour were such as mechanically to narrow, and almost to occlude the uterine orifice.

The enlargement of one or more of the follicles of the cervix, so as to form distinct cysts in the uterine substance, is of rare occurrence. In the few instances of it which have come under my observation, a profuse albuminous discharge, unchecked by treatment, or even by the free application of the nitrate of silver within the cervical canal, has been invariably present. On one or two occasions I have felt at the upper part of the cervix a small nodule, which might readily be taken for a small fibrous tumour, but which may be known by its yielding slightly on firm pressure, and by its size not being invariably the same at different times. I have not found these cysts associated with menorrhagia, though that symptom was present in some of the cases related in M. Huguier's essay on this affection.

I do not know of any special difficulty attending the *diagnosis* of these outgrowths, nor of any particular rules which can be laid down for the avoidance of error. The very small polypi are sometimes scarcely perceptible by the finger, and I have already referred to the enlargement of the cervix which they occasionally produce, and which is likely to mislead the unwary. The only rule that can be given for practical guidance is, however, this: that in no case of long-continued menorrhagia should we be content with mere digital examination, but should invariably employ the speculum; and further, if no satisfactory conclusion be thereby arrived at, we should dilate the os uteri with sponge tents, in order that the cervical canal may be brought within reach both of examination with the finger and with the speculum. If these precautions be neglected, the patient whom we have failed to relieve may place herself under some more careful practitioner, who will at once detect the cause of her symptoms, and cure her by an extremely simple operation.

For the most part nothing is more easy than *the removal of these small outgrowths*. The smallest may be removed by

laying hold of them with a pair of long forceps and twisting them off, while those which are somewhat larger, after being twisted to check the risk of bleeding, may be cut off with a pair of scissors. The bivalve speculum should always be employed in doing this, and both forceps and scissors are made for the purpose, so constructed as to be readily worked within the speculum. To attempt their removal by means of forceps or scissors simply guided by the hand, is at best but a bungling mode of proceeding, while besides, the risk of hæmorrhage is much greater than it would be if, after the removal of the polypus, the part whence it sprang were touched with the solid nitrate of silver, a precaution which I now never omit. Dr. Locock* has described a sort of long gouge, which he has contrived with much ingenuity, for the removal of small polypi of the cervix uteri, but these bodies, often so small as to be scarcely distinguishable by the finger, are also far too moveable to be readily detached by any instrument, introduced as this must be pretty much at a venture, and I have found it, on trial, practically useless. In the case of the sessile outgrowths, which I spoke of as occasionally resembling, in their relation to the uterine walls, those of the carneæ columnæ to the heart, I have applied the acid nitrate of mercury by means of the speculum, and by this proceeding destroyed the outgrowths, and arrested the bleeding.

In the case of the larger growths made up either of fibro-cellular tissue, or of hypertrophied uterine follicles, I also employ the speculum if practicable. If the outgrowth be too large to come readily within the blades of the speculum, while its structure is too frail, or its pedicle too thin to allow of its being seized and drawn down by means of the Museux hooks, I employ a pair of forceps similar to those used by surgeons for operations on the tongue, with rackwork at the handles to ensure the firm closure of the instrument. In all operations of this kind it is a great convenience to have the forceps or hooks made with a lock like that of the midwifery forceps, by which means each blade

* *Medico-Chirurgical Transactions*, vol. xxxi. p. 171.

may be introduced separately, may be carried higher up along the pedicle of the growth, and made to seize it more firmly, than can be done if the blades are united, and have to be separated after their introduction into the vagina. The polypus being laid hold of by this instrument, a pair of curved, blunt-pointed scissors may easily be carried up to divide the pedicle, while any hæmorrhage that may follow will usually be checked with ease by the application of nitrate of silver through the speculum, and by the subsequent introduction along it of a piece of cotton wool soaked in the tincture of matico, and which may be easily withdrawn after a few hours by a thread previously fastened to it.

The question of the comparative merits of the ligature and of excision, can scarcely be raised with reference to these small polypi, since the latter proceeding is so simple and easy, and with due care is not attended by any serious risk of hæmorrhage. The forcible *avulsion* of polypi is a rough and hazardous proceeding, a relic of barbarous surgery; while their strangulation by means of peculiarly constructed forceps* appears to me to be possessed of no advantage over the use of the ligature.

Slight as in most cases the operation for the removal of these outgrowths is, it is yet a matter of prudence to keep our patient in bed for one or two days after its performance. On the only occasion in which I neglected this precaution, and allowed a woman from whom I had removed a small vascular polypus in the out-patient room to return home, an attack of peritonitis came on which necessitated her reception into the hospital, where, however, the disease speedily yielded to appropriate remedies.

Since I became acquainted with the essay of M. Huguier, I have not met with any of those enormous cystic enlargements of the uterine follicles whose nature was described a short time since. I applied, in the few instances which had come under my notice, the solid nitrate of silver abundantly within the cervical canal, but with scarcely any benefit. M. Huguier,

* A proceeding first suggested by Sir Charles Bell, in his *Principles of Operative Surgery*, and renewed with some modifications recently by M. Gensoul, of Lyons, in a pamphlet entitled *Nouveau Procédé pour operer les Polypes de Matrice*, Lyons, 8vo, 1851.

however, has adopted, and with marked success, the simple plan of scarifying the interior of the neck of the womb previously to applying the caustic, by which means the cysts are emptied of their albuminous contents, and the caustic comes to act immediately upon their secreting membrane.

Allied to these outgrowths in many of the symptoms to which they give rise, though differing in their essential characters, are those accumulations of blood within the uterine cavity which, having undergone certain changes and a kind of imperfect organization, have received the name of *fibrinous polypi*. The late Professor Kiwisch,* who was, to the best of my knowledge, the first person to give a clear description of this affection, admits the comparative unsuitability of the epithet, which may, however, be conveniently retained for the present. In certain conditions, independent, as he believes, of impregnation; consequent, as others think, upon previous abortion, the walls of the uterus may be so soft and yielding as to allow of the gradual accumulation of effused blood in the cavity of the organ. In the course of time the clot may not only pass through those changes by which the colouring matter is removed from its exterior,—which assumes a dirty white or greyish aspect, while portions of a dark red hue are still to be found within, but may also be the seat of the same kind of imperfect organization as has been observed in the case of hæmorrhages into the arachnoid, or of blood effused in other situations.† Like cardiac polypi, so these become firmly adherent to the walls of the cavity within which they form; and the late Franz Kilian, of Mayence, found one whose constituent fibrine was in various stages of fibrillization, while its surface had received a partial investment of tessellated epithelium, which he believed to be due to the advanced organization of the outer layer of fibrine.‡

* In the first edition of his *Klinische Vorträge*, &c., published in 1849, vol. i. p. 420, § 222. He made no addition to the account there given in the subsequent editions of his book.

† On which subject see Paget's *Lectures on Surgical Pathology*, vol. i. pp. 173—175.

‡ Henle and Pfeuffer's *Zeitschrift*, vol. vii. 1849, p. 149.

The very nature of the organ within which these collections form, is unfavourable to that more complete organization taking place in them which may occur in similar effusions in other parts. After the lapse of a few months at the latest, the uterus becomes irritated by the presence of the clot, hæmorrhage takes place, the organ contracts, and the mass is at length expelled with symptoms almost identical with those of an abortion.

The question, as I just now mentioned, has been raised as to whether this fibrinous polypus forms independent of the previous enlargement of the uterus by abortion or delivery at the full period. Kiwisch believed that it does; and alleged as characteristic of it that the chief accumulation of blood takes place not within the body of the womb, but in the dilated cervical canal. This statement, however, is contraverted by his worthy successor Professor Scanzoni,* and my own experience of analogous cases coincides with that of Scanzoni, though I confess that the subject still requires further elucidation.

Two cases have come under my own notice in which, after abortion and the supposed complete expulsion of the ovum, pain has still been experienced, and hæmorrhage took place at frequent intervals, in one of the cases in very great abundance. In one instance these symptoms continued for six weeks; in the other for four months; but in both a portion of decidua, or at least of a substance resembling it, was discovered in the clot that was then expelled, and with the discharge of this, the hæmorrhage and all the symptoms disappeared.

Kiwisch's cases present a peculiarity which I have not observed, namely, the suppression of the menses for a period of from six weeks to three months before the attacks of hæmorrhage which excited the patient's alarm.

In either case the same treatment, would, I apprehend, be successful, namely the injection of water into the uterine cavity, which Kiwisch employs cold, but which I have used tepid, and

* *Verhandlungen der Phys. Med. Gesellschaft in Würzburg*, vol. ii. p. 30.

have found excite sufficiently energetic uterine contractions, without producing that great shock which I have sometimes seen follow the injection of perfectly cold water into the cavity of the unimpregnated womb.*

* There is a peculiar form of uterine polypus, of which Dr. R. Lee gives a delineation in plate ix. fig. i. of his beautiful, though unfortunately incomplete, *Practical Observations on Diseases of the Uterus*, folio, 1849, part ii. He terms it a *fibro-cystic* tumour; but his account of its structure is too meagre to enable one to determine its real nature. Dr. Oldham, in his paper already referred to, gives a sketch of a similar growth, and suggests its probable source in some peculiar alteration or hypertrophy of the uterine glands. I find no account of it in other works, and pass it over from having no personal knowledge concerning it.

For the same reason, and also from suspecting some error of diagnosis concerning it, I content myself with this reference to the enormous hollow polypus described by Boivin and Dugés, at p. 337 of vol. i. of their work on *Diseases of Women*, and delineated in figs. 3 and 4 of plate xix. of their Atlas.

LECTURE XV.

UTERINE TUMOURS AND OUTGROWTHS.

FIBROUS TUMOURS ;—their general characters, varying seat, and identity of microscopic structure. Influence of these growths upon the uterus, and causes which modify it. Their number and size. Changes which they undergo, and nature's efforts to get rid of them ;—their disintegration, their calcareous transformation. Frequency of these growths ;—influence of age on their production. Symptoms : disorder of menstruation, hæmorrhage, pain, sterility and miscarriage ; their comparative frequency. Mode of access of the symptoms. General sketch of symptoms of fibrous tumours.

WE are now about to enter on an examination of one of the most important ailments of the uterus ; one which is frequent in its occurrence, serious in its results, and but little amenable to treatment. It is, moreover, characterized by much uncertainty in its rate of progress, which, sometimes rapid, is at other times very slow, while still more rarely, the disease is almost or altogether cured by nature, who either eliminates the morbid structure from the organ whence it sprang, or effects changes in it such as completely stop its growth, and render it quite harmless.

The *fibrous tumour* of the uterus (for this name seems to me the most appropriate among the many designations which it has received) is a growth more or less intimately connected with the uterine walls, with which its structure is almost identical. It is seldom solitary, but several tumours are usually found to be present at the same time, though one or two generally outstrip the others in the rapidity of their development, the rate of which, as well as the nature of the symptoms, are greatly influenced by the situation that they occupy.

Whatever is the situation or size of one of these tumours, it is characterized by a spherical form and a firm texture, though

its surface is sometimes nodulated, as if from the aggregation together of several tumours, and the firm texture is occasionally interrupted by irregular spaces or cavities containing fluid, while many minor differences exist in the degree of firmness, elasticity, or succulence of different specimens. On a section being made of any of these tumours, they present great similarity to each other, being composed of a dense greyish structure, intersected by numerous dead white bands and lines which are almost invariably arranged according to a definite type or plan. In some instances these fibres have a concentric arrangement, while in others they have a wavy distribution, or are disposed around several different centres. Tumours of the first kind are usually remarkable for their hardness and their small degree of vascularity; they are also contained within a remarkably distinct fibro-cellular investment, are imbedded in the uterine substance, and seldom attain a size exceeding that of a shelled walnut. The other varieties are more vascular, less firm, have a less complete capsule, may occupy all parts of the exterior or interior of the womb, and may grow to a very large size, so as to weigh twenty, forty, or even seventy pounds. Moreover, it happens sometimes that in the course of their development two or more tumours coalesce, at least apparently, so as to form a large growth, though on a section, it will be seen that the different growths remain distinct from each other, separated by fibro-cellular septa, the remains of the more complete investment by which, when smaller, each was surrounded. Lastly, they sometimes assume the form of distinct outgrowths from the uterine substance; the fibres of the womb not merely passing over the tumour at some parts, or even over the whole of its surface, but actually growing into and being continuous with it. This last form is, I believe, observed only in the case of some fibrous tumours growing into the cavity of the womb, and constituting polypi.

None of these differences, however, are accompanied by any important modifications in the essential structure of these growths. They are all made up of fibres resembling those of very dense cellular tissue, or of tendinous substance, or of elastic

tissue, presenting various degrees of completeness of development, and intermingled with cytoblasts and a granular substance, the abundance of which is usually in inverse proportion to the perfection of the fibrous element of the growth. In almost every instance there are present also some of the broad unstriped muscular fibres of the uterine tissue, and these sometimes enter very largely into the composition of the tumours; while, where this is not the case, the uterine tissue nevertheless is intermingled with the pedicle of those growths which project into the cavity of the womb, and furnishes them with a partial investment, often, indeed, with a complete covering.* When to this we add, that though the degree of vascularity of these tumours varies widely in different instances, there is nothing at all peculiar in the arrangement of their vessels, and further that, like the tissue from whence they spring, they admit of being resolved into gelatine by boiling, we have mentioned everything of moment concerning their composition and their structure.

There are several different situations from any or all of which these growths may proceed, and it is not very unusual to meet with illustrations of all in the same uterus. Sometimes they are developed immediately beneath the peritoneum which covers the uterus, or the first half-inch or inch of the ovarian ligament or Fallopian tubes. Such perfectly superficial growths are generally limited to the fundus or upper part of the body of the uterus, are more frequent on its posterior than on its anterior surface, and for the most part remain of a very small size, scarcely exceeding the bigness of a large pea or a kidney bean, and seldom projecting so far as to form more than the half of a much flattened sphere. In other instances, they proceed from the thickness of the uterine wall, and may then either grow outwards towards the peritoneum, or inwards towards the cavity of the womb, though the former is by far the more

* The first careful microscopic examination of these growths was made by Valentin. See his *Repertorium*, 1843, p. 10. In Walter's *Dissertation*, already referred to, are the results of the microscopic examination of five different specimens, by Professor Bidder, § 20, pp. 37—41; and lastly, the results of some other examinations are given by Paget, *op. cit.*, vol. ii. pp. 135, 136.

frequent occurrence, and is so doubtless for the obvious reason that in that direction the tumour encounters the least resistance to its growth. Such tumours sometimes attain the size of a goose's egg, of a large pear, or even a greater bulk, and are connected with the uterus by a thick pedicle into which uterine fibres enter, though, unlike the tumours which grow towards the cavity of the womb, they do not receive an investment from its substance. The tumours that thus grow outwardly from the uterine walls are often present in considerable number, as may be seen, for instance, in a preparation in the Museum of St. Bartholomew's Hospital, where twelve of these growths may be counted projecting from its surface, though its interior is quite free from disease. When they grow internally, they are sometimes positive outgrowths of the uterine tissue, while even when this is not the case, their relations to the womb are generally very intimate.* They receive an investment of uterine tissue, and are often much more abundantly supplied with blood than any other varieties of these growths; points, all of which are of very great practical moment, modifying the patient's symptoms, and influencing, also, our conduct. Whatever be their point of origin, these growths usually tend, as they increase in size, to become distinctly pediculated. To this, however, there are occasional exceptions. The firm, very slightly vascular tumour, with concentric arrangement of its fibres, remains imbedded in the uterine substance and covered by its investment of cellular membrane, without any disposition to project into the interior, or to protrude at the exterior of the organ. In some cases, too, the more vascular variety of fibrous tumour, with a very elastic and very succulent tissue, becomes developed in the thickness of one or other uterine wall, attaining the size of the foetal head, or even a greater bulk, and producing very great enlargement of the uterus, but retaining its spherical form,

* The Museum of St. Bartholomew's Hospital contains two specimens illustrating exceedingly well the difference between the outgrowth and the tumour, for which purpose they are diagrammatized by Mr. Paget, *op. cit.*, vol. ii. p. 131, figs. 11 and 12.

and continuing imbedded in the substance of the organ rather than projecting from it in either direction.*

The influence which these growths exert upon the uterus varies to a very remarkable extent, but is in proportion to the intimacy of the relation between the tumour and the womb, rather than to the mere size to which the tumour itself attains. When situated external to the womb, and growing into the peritoneal cavity, the tumour often acquires an enormous size, and the womb is, as might be expected, much elongated, and strangely deformed; but nevertheless will not in general be found much increased in bulk. On the other hand, the development of a single tumour within the substance of the womb brings about an increase of its size, a thickening of its walls, and a development of its tissue very similar to those which take place during pregnancy. Of this fact a preparation in the Museum of St. Bartholomew's Hospital affords a very remarkable illustration. Imbedded in the anterior wall of the uterus is a fibrous tumour, no larger than an unshelled almond, and of such slight vascularity that the injection which has deeply coloured the parietes of the womb has not entered the vessels of the tumour. This small growth, however, has so stimulated the uterus that it has grown to a length of five inches, and that its walls are at least an inch and a quarter thick. In like manner, the growths which project into the uterine cavity bring with them a remarkable increase of the womb, and this not due to the mere distension of the organ by the substance contained within its cavity, but to the actual growth of its tissue and unfolding of its muscularity, such as takes place in pregnancy, and even in those rare cases where the development of the ovum goes on external to the womb itself. In these cases, however, the womb after a certain period contracts upon and expels the tumour or polypus from its cavity, or the tumour passes out of it quietly and imperceptibly, with which occurrence the further increase of the organ comes to a standstill. Hence it is that

* A condition admirably represented in Wenzel, *Krankheiten des Uterus*, folio, Mainz, 1816, plates vii. and viii., x. and xi.

the instances in which the womb acquires the largest size are not those in which the tumour hangs down by a pedicle into its cavity, but those in which its development takes place into the substance of one or other uterine wall; and the organ thus increased in bulk sometimes attains the size of a child's head; and its cavity, as measured by the uterine sound, may be found to equal four, five, or six inches in length.

It is a matter rather of idle curiosity than of practical utility to determine the number of these growths that may exist in any one uterus, or the size to which they may attain.* They are seldom solitary, sometimes they are very numerous; and they are usually present in the greatest number on the peritoneal surface of the womb, while it is rare to find more than one projecting at the same time into the cavity of the organ. This, however, is probably due to the circumstance that there is not room for more than one tumour at a time within the cavity of the womb, for it is not a very uncommon thing, some months after the removal of one growth, to find another occupying the same situation, producing the same symptoms, and calling once more for a recourse to the same operation.

With reference to the size of these growths, we encounter wide differences again in this respect, instances being on record of their attaining to such a size as to weigh even eighty pounds; and the weight of the growth in the remarkable case delineated by Walter was seventy-four pounds.† These unquestionably are

* Walter's *Dissertation*, already quoted, §§ 11 and 12; and pp. 27—30; and Meissner, *op. cit.*, vol. ii. pp. 16—19, contain references to the most remarkable cases of large or numerous fibrous tumours.

† *Op. cit.* Though in this case the whole tumour was of solid texture, still in some instances the enormous dimensions of these growths have been due to cyst formation, and the accumulation of a large quantity of fluid in their interior. This fluid has sometimes amounted to many pints, and the distinct fluctuation to which it gave rise has led to the disease being taken for ovarian dropsy, and to the patient being tapped for its relief. No instance of it has come under my own observation; but the impression left on my mind, by reading the various recorded cases of it, is, that the disease is essentially different from ordinary fibrous tumour, since, in addition to one or two cysts of very great size, a number of small cysts seem always to have been present in their immediate vicinity, and entering into the structure of the more solid portions of its growth. The cases, in short, seem to be instances of *fibro-cystic* disease of the uterus, and as such call for special investi-

quite exceptional instances, but they are worth bearing in mind as showing that in a diagnostic point of view the mere size of the tumour is not to be relied on in discriminating between growths from the uterus and those proceeding from the ovary.

There are very few ailments in the course of which nature does not make some efforts, often, indeed, imperfect and unsuccessful efforts, at cure. In the case of fibrous tumours, there are five different modes in which this attempt is made. Either the pedicle undergoes a process of gradual attenuation, and then gives way, the tumour thus becoming detached from the uterus; or more rarely, a portion of its investment becomes ulcerated or dies, and the growth gradually shells out from the sheath of cellular membrane which contained it; or a change takes place in its substance, the exact nature of which is not quite understood, it becomes disintegrated, dies, and is got rid of piecemeal; or a different change occurs, similar to what we see in other morbid products,—the tumour undergoes the cretaceous transformation, and though not eliminated from the womb, it ceases to stand in any vital relation to it, and the symptoms which it once produced diminish, or altogether disappear.

Nothing can be simpler than the processes by which these tumours, when growing within the uterine cavity, may become detached from their connexions and eventually expelled, though my own experience does not lead me to believe that any of them are of frequent occurrence. It may happen, however, either that the pedicle, by constant traction of the growth, becomes thinner and thinner, till at length it gives way, or that the margins of the os uteri, tightly constricting, strangulate it, or that in its violent expulsive efforts, the uterus snaps the slender stalk of the outgrowth.* This detachment of the tumour, by the giving way of its pedicle, is not limited to cases in which it

gation; rather than ordinary fibrous tumours, in whose substance cysts have accidentally formed. See, in addition to the references given by Paget, *op. cit.*, vol. ii. p. 138, Kiwisch, *op. cit.*, vol. i. p. 455, and Chiari, *op. cit.*, p. 404.

* A very elaborate paper on this subject, containing an enumeration of twenty-four cases collected from different sources, was published by M. Marchal de Calvi, in the *Annales de la Chirurgie*, August, 1843.

grows into the cavity of the womb, but is also occasionally, though very rarely, observed in instances where the tumour has sprung from the peritoneal surface of the womb. In the only case of the kind which has come under my own notice, the tumour had arisen from the posterior uterine wall, and had projected into the interspace between the uterus and rectum, which continental writers commonly speak of as the space of Douglas. Though perfectly detached from the uterus, however, the tumour, which was of the size of a walnut, had not fallen loose into the peritoneal cavity, but was held in its position by false membrane passing between the uterus and rectum; and I believe that in almost all recorded instances of the complete detachment of a fibrous tumour from the outer surface of the womb, the outgrowth has been retained in a similar manner close to the part whence it originally sprang.

Another mode by which fibrous tumours are sometimes got rid of, is the disintegration of their tissue, and their subsequent expulsion. This process seems to be one of death of the tumour; but the mode in which it is brought about is not by any means clearly understood. It is not a process of inflammation, nor one of its ordinary results. The fibrous tumour, when attacked by inflammation, presents a vivid rose-red colour, and shows a greatly increased vascularity; while local pain and the general signs of inflammation attend the process during the patient's life. The disintegration of the tumour, on the contrary, takes place unattended by symptoms which could lead to a suspicion of what is going on; and the outgrowth becomes soft, and breaks down into a dirty putrilage. This change is not very unusual in the lower part of fibrous polypi, when they project through the os uteri into the vagina. The mucous membrane covering this part becomes ulcerated, and being thus deprived of its most important source of nutrition, the adjacent portion of the tumour loses its vitality; the cellular tissue binding the bundles of its fibres together, dies first, and such a growth may sometimes be found firm and solid, and presenting all the ordinary characters of a fibrous tumour at its upper part, but lower down split up

into a number of shreds or packets of fibres connected together by a dirty decaying matter. By degrees, these firmer fibres themselves soften, and the process of decay extending further and further, the whole growth may come away imperceptibly; or, on attempting to remove the polypus, we may be surprised to find that what had once been a very firm mass, is now so soft that the hooks by which we endeavour to draw it down, tear out; that nature, in short, has anticipated us, and that in a few more days or weeks she will have completed her operation.

It is not, however, in these cases only that the death of a fibrous tumour takes place. The same process may go on in the tumour, while still completely within the cavity of the womb, and while still of inconsiderable size. On examining the womb of a woman sixty-three years old, and who was not known to have suffered from any symptoms of uterine disease, the organ was found deformed by eight fibrous tumours growing from its outer surface, which altogether made up a mass three times the size of the healthy womb. One of these tumours, as large as a pigeon's egg, was connected with the posterior uterine wall only by peritoneum and a very slender pedicle of cellular tissue, and would probably in a very short time have become completely separated, while many other tumours were undergoing the calcareous change, and were thus in process of cure. On laying open the cavity of the womb, it was found to be occupied by a growth of the size and shape of a sugared almond, 1·25 inch long by ·9 of an inch broad. On its free surface it was covered by the uterine mucous membrane; but it was imbedded for about a fourth of its thickness in the uterine wall, from which it was separated by a distinct envelope of dense cellular tissue, such as surrounds fibrous tumours in general. It was of a dark, almost melanotic, colour, through the greater part, though not the whole of its substance, and looked as if blood were infiltrated into the substance of a softening fibrous tumour; for enough of its tissue still remained to show its real nature, even irrespective of the evidence afforded by numerous small fibrous tumours vary-

ing in size from that of a pea to that of a bean, which were imbedded in the uterine walls.

Had this person lived a little longer, one of two things would doubtless have occurred ;—either the elements of the softened outgrowth would have been absorbed, or its cellular investment would at some point have given way, and a slight discharge, apparently of coagulum, would have been the sole evidence of the ailment from which the patient had suffered, and of the means by which nature had wrought for its removal. Whether without any such previous change in its tissue, fibrous tumours are ever completely removed by absorption, is a question which I am unable to answer from my own observation. I should quite believe in the possibility of the occurrence, though my impression is that softening and disintegration usually precede the removal of the tumour, and that almost invariably it is not absorbed, but is expelled in its softened state and piecemeal from the cavity of the womb.

Whether in health or in disease, there is a general analogy between nature's modes of proceeding, even in cases apparently the most diverse, which it is both interesting and instructive to study. The tuberculous bronchial gland is softened, its investment is absorbed, a communication is opened with the air-tube, and the diseased matter is expelled ; or when this cannot be accomplished, another change in its elements takes place ; the gland shrinks, its substance grows harder and harder, chemical activities are set to work, and a few masses of calcareous matter unexpectedly discovered close to the bronchi of some person who had died in a good old age, tell, not infrequently, that in his youth he was the subject of a disease which usually tends to destroy, and to destroy speedily, those whom it attacks.

Just the same kind of changes occur in fibrous tumours of the womb. We have already studied the process of softening, by which their removal is sometimes brought about : a process of hardening by calcareous deposit in their substance is still more common. This deposit sometimes takes place merely in the periphery of the tumour, which thus receives a calcareous invest-

ment or shell, its interior remaining unaltered. This, however, is very unusual, though it is less rare to find incipient calcification of the interior of the tumour, while the change of its surface is complete. The most common form is that in which irregular masses like coral are deposited in various parts of the tumour, whence they may be separated by maceration, or which make up in the case of the smaller tumours almost the entire mass. Now and then, too, this alteration goes on to the same extent even in the larger growths, and they become converted into a substance of stony hardness, which, as is the case with a tumour in the Museum of the Middlesex Hospital, may receive as smooth a polish at the hands of the lapidary as any geological specimen. The growths which proceed from the outer surface of the womb, where nutrition is usually the least active, are those in which this change most commonly takes place. Still the rule is by no means without exception, as a tumour projecting into the cavity of the womb sometimes undergoes this alteration, and being at length expelled from the uterus, constitutes the so-called osseous concretions,* the origin and nature of which were once a puzzle to observers. It is, I imagine, almost superfluous to say that these tumours contain none of the elements of true bone, that the change which takes place in them is unaccompanied by the formation of bone cartilage; that in short it is due to a chemical rather than to a physiological process, and like the so-called ossification of the arteries, is an evidence of enfeebled vitality, not of active nutrition.†

The only other question of importance concerning the pathology of fibrous tumours of the uterus, is that of their relation to malignant disease, and the possibility of their degeneration into

* There are some good drawings illustrative of these changes in fibrous tumours in Hooper's *Morbid Anatomy of the Human Uterus*, 4to, London, 1832, plate vii.

† See on this subject the remarks of Professor Bidder at p. 42 of Walter's *Dissertation*, who believes in the occasional presence of true bone; while Henle also, *Allgemeine Anatomie*, p. 809, states that he has discovered cartilage corpuscles in them; a statement which Vogel, in Wagner's *Handbuch der Physiologie*, vol. i. p. 823, does not corroborate.

carcinomatous structures. Nothing but the imperfect means of observation possessed in former days would have allowed this question to remain so long undecided; but while hard cancer was believed to be a common form of uterine disease, and every induration of the cervix was regarded as scirrhus, it is not surprising that hard tumours should have been believed to be at least of kindred nature. It may, however, be now positively asserted that no such degeneration of a fibrous tumour ever takes place; and further that though fibrous tumours do not exclude carcinoma, they yet are not associated together with any special frequency.*

Fibrous tumours are generally regarded, and I believe with truth, as the most frequent of all organic diseases of the womb, though I cannot pretend to state the fact numerically, for the reasons which have been already referred to as vitiating the statistics of hospital practice. Strange as it seems, too, the results of post-mortem examinations are conflicting; on the one hand we have the statement on Bayle's authority, that every fifth woman, after the age of thirty-five, has fibrous tumours in her uterus; and on the other hand, the allegation of M. Pichard,† that they were met with only seven times in 800 examinations made by himself or by M. Lair.‡ Mr. Pollock,§ in a paper read before the Medico-Chirurgical Society, states that of 583 uteri examined by himself and his predecessor at St. George's Hospital, 265 were diseased, and in thirty-nine of them fibrous

* Dr. Lee, in his *Clinical Reports of Uterine and Ovarian Diseases*, relates one case of the coexistence of a calcareous fibrous tumour and malignant ulceration of the uterine cavity, p. 176, Case V.; and one case of the presence of the two has come under my own notice. Chiari's figures, indeed, would lead to the belief that fibrous tumours of the womb are associated with a special liability to malignant disease, since in twenty-five examinations of patients suffering from them, two presented also cancer of the womb, one cancer of the mamma and lung, and six cancer of other organs, *op. cit.*, p. 404. I know of no other data, however, which would lead to the same conclusion.

† *Dict. des Sciences Médicales*, 8vo, Paris, 1813; Article *Corps Fibreux de la Matrice*, p. 73.

‡ *Des abus de la Cautérisation, &c., dans les Maladies de la Matrice*, 8vo, Paris, 1846, Table at the end.

§ *Lancet*, Feb. 7, 1852, p. 155.

tumours were present, while cancer existed in only thirty-eight. The value of these statements is, however, not a little diminished by their referring to females of all ages, from birth up to old age. Equally unsatisfactory are the data given by MM. Braun and Chiari,* according to whom out of 2494 post-mortem examinations of both sexes, twenty-five instances were found of the presence of fibrous tumours of the uterus. Of seventy instances in which I have examined the uterus of women who died after puberty of other than uterine diseases, seven presented fibrous tumour of the uterus. From these data we arrive at nothing more definite than the general conclusion that fibrous tumours of the uterus are very frequent, probably more frequent than cancerous disease of that organ.

The data of which we are possessed with reference to the *age* of patients affected with fibrous tumours, though very scanty, are yet more satisfactory, because more definite. Twenty-four post-mortem examinations of Braun and Chiari, and my own seven cases, yield the following result as to the age of the subjects in whom the tumours were found :—

2 age not stated.						
1 was aged 24 years ; and she died of puerperal peritonitis.						
2 were aged between 30 and 40 years.						
13	”	”	40	”	50	”
4	”	”	50	”	60	”
7	”	”	60	”	70	”
1	”	”	70			
1	”	”	80			
<hr/>						
31						

In many of these cases, however, the tumours had doubtless existed for many years, and we are therefore concerned rather with the age at which patients first complain of those symptoms to which fibrous tumours give rise, though even then the disease itself has probably existed in many instances for months or even years before it attracted notice.

Braun and Chiari have stated the ages of thirty-seven patients

* *Klinik der Geburtshülfe und Gynäkologie*, 2nd part, Erlangen, 1853, p. 397.

who applied for relief at the great hospital at Vienna on account of fibrous tumours of the uterus, not including polypi; and if to these be added thirty-nine cases which have come under my own observation, we obtain a total of seventy-six cases, of which:—

18 were between 20 and 30 years of age.			
22	„	30	„ 40 „
27	„	40	„ 50 „
8	„	50	„ 60 „
1	„	72	years
<hr/>			
76			

The above result differs in no important degree from that obtained by Malgaigne* on a comparison of fifty-one cases of fibrous polypus of the uterus; to which, if seven cases of my own be added, we obtain the following result.

From 26 to 30 years	. . . . .	4
„ 30 to 40	„	22
„ 40 to 50	„	21
„ 50 to 60	„	4
„ 60 to 70	„	3
„ 70 to 74	„	4
<hr/>		58

If, however, instead of taking the age at which the patient first applied at the hospital, we draw our conclusions, as we ought rather to do, from the period at which the symptoms characteristic of the disease first manifested themselves, it will be seen that fibrous tumours and fibrous polypi are an affection incidental to the season of sexual vigour much oftener than to the period of its decline.

Age of patients.		First came under observation.	Symptoms commenced.
Under	20 years . . .	...	1
Between	20 and 30 years	3	8
„	30 „ 40 „	17	22
„	40 „ 50 „	21	12
„	50 „ 60 „	5	3
<hr/>		46	46

* *Des Polypes Utérins, Thèse de Concours*, 4to, Paris, 1833, p. 12.

It has been asserted on Bayle's authority that single women are more liable to these tumours than those who are married, but my own observation does not bear out the statement; for of forty women affected with non-pediculated fibrous tumours, thirty-four were married; or including the cases of fibrous polypi, of forty-seven, thirty-nine were married. Though inadequate to settle the question, the above numbers are at least sufficient to show that the non-exercise of the sexual functions has at least no very marked influence in predisposing to the disease.

Taking leave, then, of that attempt to ascertain the cause of this affection, which in the case of all diseases we are so disposed to make, and from which we so seldom arrive at any satisfactory result, we may now pass to the very important inquiry concerning the consequences which these tumours produce and the *symptoms* which they occasion.

First of all it may be premised that sometimes these tumours are attended by no symptoms at all; that they exist for many years without producing any inconvenience whatever. Illustrations of this fact are afforded us by the discovery of fibrous tumours after death in the uteri of women whose sexual system had never shown any sign of disturbance; by our accidentally ascertaining their presence when examining a patient for some other purpose; or by the sudden supervention of symptoms calling our attention to the state of the womb, and revealing the existence of a large fibrous tumour, whose growth must have been going on for years. As might be expected, the constancy of the symptoms is generally proportionate to the intimacy of the relation between the tumour and the uterus. The growths which proceed from the outer surface of the womb often produce no symptoms except such as may be due to their mechanical pressure upon adjacent organs; whilst those which are imbedded in the uterine substance almost always disturb the functions of the organ, even before they have attained any considerable size; and the polypi or growths which occupy the cavity of the womb attract attention almost from the first by the hæmorrhage which they occasion. Some relation, too, subsists between the general

activity of the sexual system and the exercise of its highest function on the one hand, and the severity of the symptoms of fibrous tumour on the other. It is thus that in women advanced in life, and whose menstruation has ceased, the effects of fibrous tumours are usually less serious than in younger women. It is thus, too, that these growths may produce so little inconvenience as to be scarcely suspected so long as a woman remains single, but may become the occasion of much suffering so soon as she marries, and as sexual intercourse occasions the frequently increased afflux of blood towards the womb. The bearing of these facts upon our prognosis and treatment must be sufficiently obvious even now, but will be still more apparent after we have examined the symptoms of this affection more in detail.

Those fibrous tumours which hang by a pedicle into the uterine cavity, and which are commonly called uterine polypi, are attended by one invariable and characteristic symptom, namely, hæmorrhage. Since then their diagnosis is comparatively easy, and since their treatment differs from that which is generally practicable in the other forms of fibrous tumour, we will postpone their further consideration for the present; and my remarks will be understood to have reference to the other forms of fibrous tumour which are either imbedded in the uterine substance, or project from its peritoneal surface, not into its cavity. Menstrual disorder, uterine hæmorrhage, pain, dysuria, and more rarely, difficult defæcation, are the more important symptoms of fibrous tumours, though from being present in various degrees, and in varying combinations, they often leave room for much doubt as to the nature of the affection to which they are due.

The following are the principal results deduced from a comparison of forty cases of fibrous tumours of the uterus, of which I have preserved a sufficient record :—

In four of the forty cases menstruation had already ceased when the patients came under my observation, but in one of them considerable hæmorrhage occurred from the uterus at irregular intervals, in two such hæmorrhage occurred in but small quantity, and in one it did not take place at all.

In ten more cases the menstrual function was not disturbed at all, and in six of them there was no intercurrent uterine hæmorrhage at other times; but in four patients hæmorrhage occasionally took place, which, however, had no relation in the time of its occurrence to the menstrual function.

In the remaining twenty-six cases menstruation was more or less seriously disturbed, being

Excessive	in 10 cases.
„ and painful	5 „
„ „ irregular	3 „
Painful	4 „
„ and irregular	2 „
Irregular	1 „
Scanty	1 „
	<hr/>
	26

It appears then that in eighteen out of thirty-six cases in which menstruation had not ceased, it was either excessive in quantity, or over frequent in recurrence, or both; while in eleven instances the function was performed with excessive pain; and only in one instance did the quantity of blood lost at the period fall below that to which the patient was accustomed when in health.

In twenty cases hæmorrhage from the uterus occurred at other times than those of menstruation; an accident which took place after the cessation of the menses in 3 cases,

coincided with menorrhagia	12 „
„ „ painful menstruation	2 „
„ „ „ and irregular menstruation	1 „
„ „ irregular menstruation	1 „
„ „ no disorder of menstruation	1 „

20

In twenty-four cases, pain was complained of at other periods than those of menstruation. This pain varied greatly in its severity, its situation, and its continuance; some patients describing it as a burning sensation, others as a sense of bearing down, while others again seemed to suffer from it in paroxysms

of almost intolerable anguish. The pain in eight of the twenty-four instances coincided with painful menstruation ; but in three cases of dysmenorrhœa, pain was not experienced at other than the menstrual epochs. Menstruation had already ceased in three of the cases in which pain was experienced, and in the remaining thirteen was performed without suffering, and in five of the number, without disorder of any kind.

There were, moreover, eleven instances in which the patient suffered from dysuria ; either from pain in voiding urine, or from difficulty in its discharge, or from frequent desire to pass it ; while twice complaints were made of difficulty in defæcation : but none of these sensations could be referred so distinctly to the seat of the tumour or to its size as might beforehand have been expected.

The influence of fibrous tumours in modifying the rate of fecundity is very remarkable, and shows itself both in diminishing the number of conceptions, and also in increasing the proportion of pregnancies which come to a premature termination. Of the forty cases on which these observations are founded, thirty-four were those of married women ; of these, six were sterile, while the remaining twenty-eight had given birth to forty-five children, and had miscarried nineteen times. Eighteen of the twenty-eight had had but one pregnancy, which in the case of thirteen had gone on to its full period ; in five had terminated prematurely by miscarriage. It is true that two women had given birth to three children each, one to four, one to eight, and one to nine, respectively ; but in every one of these instances, the tumour was situated external to the posterior uterine wall, and, as far as could be ascertained, did not involve the substance of the womb. We shall hereafter see that even when proceeding from this situation, fibrous tumours of the uterus often render pregnancy, and labour, and the puerperal state, periods of great hazard ; but it is easy to understand that when the growths proceed from the exterior of the womb, they may not interfere with the mere term of utero-gestation.

The symptoms of fibrous tumours for the most part come on

by degrees, so that the patient cannot narrowly define the commencement of her illness, but speaks of a gradual increase in the abundance of her menstruation, or of the discomforts which attend it, or of some painful sensation, at first scarcely perceived, becoming by little and little more and more importunate, until at length, when driven to seek relief, she first became aware of the existence of the tumour. To this rule, however, exceptions are by no means uncommon; and in eight of forty cases the symptoms came on suddenly, some grave accident at once forcing itself on the attention of the patient, who had previously imagined herself quite well. In four of these eight cases, it was hæmorrhage, in the other four inability to void the urine, such as to call for the use of the catheter, which first excited the patient's alarm, though it by no means follows that the first symptoms should continue throughout the most prominent.

If now we endeavour to picture to ourselves the symptoms of fibrous tumours of the uterus, we shall, I think, find our sketch to be something of the following kind:—A person, probably a little past the prime of womanhood, but at an age at which the sexual functions are still actively performed, becomes causelessly the subject of menorrhagia, which may or may not be attended with pain. The hæmorrhage is at first readily suppressed by rest and ordinary precautions, but it afterwards returns on every slight exertion, and at length comes on without any cause at all, or continues from one menstrual period to another, so that the patient loses all count of the proper menstrual epochs. She does not experience that general constitutional disturbance which almost always accompanies idiopathic menorrhagia, but suffers merely from the loss of blood and its direct results, while in the intervals between the attacks of bleeding, she is seldom troubled by leucorrhœa, and never by any offensive discharge. Coupled with the hæmorrhage, sometimes from the very first, generally within a few months from its onset, various sensations of pain or discomfort are experienced in the lower part of the abdomen, and the neighbourhood of the womb. Among these sensations of discomfort, that of a frequent desire to pass water is one of the

most frequent. The abiding pain is seldom of great intensity; unlike the pain of chronic uterine inflammation, it is not such as to render sudden changes of posture, the sitting on a hard seat, or jolting on a rough road almost intolerable; it does not even preclude sexual intercourse. On the other hand, it is not a sharp lancinating pain like that of carcinoma, but is a dull aching, or burning, or throbbing, not in general very difficult to bear, though now and then there are associated with it occasional attacks of suffering evidently neuralgic in character, intense in its severity, and generally accompanied with violent expulsive efforts.

Any symptoms of this kind should raise a suspicion in our minds as to the probable existence of a fibrous tumour of the uterus, while neither the comparative youth nor the advanced age of the patient, neither the sudden supervention of the symptoms, nor their very slow development, should be allowed to negative this suspicion, or to bias our minds with reference to a question which a careful examination can alone decide. In any such case, and indeed in every instance where there is the least possibility of the existence of a tumour of any kind, it is necessary to begin by a careful examination of the abdomen. The tumour formed by a fibrous growth is generally very firm, nodulated, and uneven, seldom mesial, but almost always situated considerably to one side of the abdomen, so that its position alone is seldom of much value as a means of discriminating between it and tumour of the ovaries. They may, however, generally be distinguished by their smooth surface and spherical contour, as well as by a certain degree of elasticity, which is usually distinguishable in them, even though they should yield no distinct sense of fluctuation. On making a vaginal examination, the condition will be found to vary very much, according to the position and relations of the tumour. If there were any abdominal tumour, the first point to ascertain is the relation borne by it to that of the uterus, to determine whether pressure on the one is immediately communicated to the other; since thereby some clue may be obtained as to the probability of its

connexion with the substance of the womb on the one hand, or with the uterine appendages on the other. The ovarian tumour, when once it has risen out of the pelvis, almost always draws the uterus up with it, while this change of position seldom takes place when the growth proceeds from the womb itself. The posterior uterine wall is the most common seat of fibrous tumours, inasmuch as they were present there in eighteen out of forty cases,* and in ten of the number could not be discovered in any other part of the uterus that was accessible to examination. Hence we generally find a firm body, often, but not always, uneven, occupying more or less of the posterior part of the pelvic cavity, carrying the uterus forwards towards the symphysis pubis, and often more or less completely retroverting the organ; in which case it is usually displaced from the mesial line, so that the os uteri is to be found near to the pubo-iliac synostosis on one or other side. The os uteri itself is generally small, circular, and healthy; the tissue of the cervix smooth and healthy, or at the most only somewhat turgid and hard, from the frequent afflux of blood towards the organ. If the tumour be very small, springing from just behind the cervix, the diagnosis between it and retroflexion of the uterus is a matter of much difficulty, and harder still is it to make out the distinction between anteflexion of the uterus and a fibrous tumour of its anterior wall, the possibility of which must not be lost sight of in the confessed rarity of its occurrence. If the tumour is within the uterine cavity, or imbedded in its walls, the results of an examination will of course be different; the uterus will be found larger, heavier, and less moveable than natural; its lower segment may be distended by the tumour, and in that case will not be unlike the form which is assumed by the pregnant womb, though the lips of the uterus, instead of presenting the development charac-

* The result thus obtained by examination during life tallies tolerably closely with that arrived at by Mr. Lee, from a comparison of various preparations in the Museums of the metropolis. He found in twenty-two out of seventy-four cases that the growth sprang from the posterior wall of the body or neck of the uterus; an or iginmore frequent than that from any other part of the womb. See Safford Lee *On Tumours of the Uterus*, 8vo, London, 1847, p. 2, table i.

teristic of the gravid state, will be found mechanically thinned by the pressure of the tumour. The cervix uteri, too, in such cases not infrequently disappears long before the growth has attained such a size as by its prominence in the abdomen to simulate the state of the womb when gestation is half completed. If, however, the tumour does not thus project into the uterine cavity, its diagnosis will be much more difficult, for a large, a somewhat hard, and a but partially moveable uterus, will be all that is at first apparent, all perhaps that even a repeated examination may discover. Still, even here, the unaltered orifice of the womb, the absence of tenderness of its cervix, and of any thickening about the roof of the vagina, will suffice to show that neither has inflammation of its appendages fixed the organ in its position, nor inflammation of its substance or its cervix increased its size and weight. The sound may also show the cavity of the uterus to be elongated; and I believe that an enlarged, and heavy, and somewhat hard uterus, coupled with the causeless occurrence, and frequent return of uterine hæmorrhage, while the os and cervix uteri are healthy, are almost always pathognomonic of fibrous deposit in the uterine substance. It is, I imagine, scarcely necessary to say that not infrequently we come to this opinion rather by the exclusion of all other possible sources of similar symptoms than by the positive evidence afforded by any single sign pathognomonic of this affection.

It must remain, however, for our task at the next Lecture to pass in review the various anomalies in the symptoms of fibrous tumours of the uterus, and to study the different circumstances which may render our diagnosis difficult or doubtful.

LECTURE XVI.

UTERINE TUMOURS AND OUTGROWTHS.

FIBROUS TUMOURS. Their diagnosis, and exceptional character of their symptoms in some cases. Occasional difficulty of distinguishing between them and ovarian tumours. Menstrual irregularity and subsequent sudden hæmorrhage has raised suspicion of miscarriage. Sudden suppression of urine in some cases; its import. Difficulty of distinguishing between flexions and tumour of the uterus. Possibility of mistaking for cancer. Cases characterized by intense pain. Diagnosis between pregnancy and fibrous tumour, and difficulty of discovering former when complicated with latter.

Prognosis. Progress generally slow; illustrative table. Influence of pregnancy and labour; dangers which attend them, and why.

WE have hitherto looked at the symptoms of fibrous tumours of the uterus, only as they appear in the simplest cases, with nothing to obscure or to distort their characteristic features. In the study of all diseases, however, our concern is at least as much with the exception as with the rule; and if we would not fall into gross errors, we must be as ready to undo the tangled web, and to find in the midst of it the clue that may lead us right, as we should be quick to follow the signs which point out the plainest path, and render even a moment's doubt almost impossible.

Some of the rarer cases, then, must next engage us; and I must try, even at the risk of wearing out your patience, to describe some of the many circumstances which may cause us to hesitate in the *diagnosis* of fibrous tumours of the uterus.

In enumerating the symptoms of this affection, it has already been mentioned, that while hæmorrhage very generally attends it, the occurrence is yet not quite constant. It may, however, happen that missing on some occasion this, which is one of the most characteristic signs of the disease, we may begin to doubt

is nature, and to question whether the tumour which we discover is not connected with the ovary rather than with the womb itself. I do not know any certain means of avoiding error in such cases, but refer to them for the sake of impressing on you the fact, that the mere absence of hæmorrhage, or even a condition of scanty menstruation, does not negative the possibility of the existence of fibrous tumour; just as, I may add, on the other hand, very profuse hæmorrhage sometimes occurs in instances where the tumour is unquestionably connected with the ovaries.

The kind of difficulty which presents itself in some instances in distinguishing between tumours of the uterus and tumours of the ovaries, and the considerations which guide us to a solution (possibly indeed not always a correct one) of the question, will perhaps be best understood by the following sketch of the history of a woman, aged thirty-nine, who was admitted under my care into St. Bartholomew's Hospital, in April, 1851. She had been married twenty years, but for eighteen had been a widow, her only child having been born a year after marriage. Her menstruation, which commenced at fourteen, had always been regular, and unattended by any considerable inconvenience, while it had at no time been excessive. She first noticed a swelling in the right side of the abdomen, between three and four months before she came under my notice; and this tumour had since gradually increased in size. Since she first perceived the tumour, she had had two or three attacks of pain in the back, followed by retention of urine; while her bowels were often constipated, and she frequently required aperient medicine. Her general health, however, was not seriously impaired.

The abdomen measured thirty-six inches and a-half at the umbilicus, forty-one inches and a-half two inches lower down. The abdominal integuments were loose, and contained a good deal of fat. A solid moveable tumour occupied the abdomen, extending from low down on the left side of the pelvis, across the mesial line, reaching on the right side to an inch and a-half above the umbilicus, and to within three inches of the right crista ilii, but not dipping down into the right side of the pelvis

as it did on the left. This tumour was solid, non-fluctuating, and its surface was somewhat nodulated. At its upper part, and at the right side near the umbilicus, one portion of the tumour, a sort of offshoot as it seemed, was moveable upon the other larger part of the growth. On examining per vaginam, the finger at once came upon a firm globular tumour occupying the pelvic cavity, and dipping down to within an inch of the outlet. At the anterior and right part of the tumour a depression could be felt, somewhat like the os uteri, though the finger could not be made to enter it; but in no other situation could the least trace of an opening be discovered. A grooved needle was introduced with some difficulty per vaginam into the tumour, but no trace of any fluid was obtained.

In this case the circumstances which favoured the supposition that the tumour was ovarian, were its large size, the alleged rapidity of its growth, the fact of its situation not being mesial, and the absence of uterine hæmorrhage during its growth. On the other hand, the mere size of the tumour is not conclusive, since, as you know, fibrous tumours of the uterus sometimes attain to enormous dimensions; while further, the early stages of its growth might all the more readily be overlooked, owing to the large quantity of fat in the abdominal walls. Further, retention of urine requiring the use of the catheter is a symptom which, while not unusual in uterine tumours, does not, to the best of my knowledge, happen during the development of tumours of the ovary; while in some of the largest fibrous tumours that have come under my notice uterine hæmorrhage has never occurred, and the only symptoms produced have been purely mechanical. It is very unusual to find so large an ovarian tumour without some sense of fluctuation; the uneven nodulated surface, and the mobility of one portion of the tumour upon the other is, moreover, consonant with what one observes in tumours of the uterus rather than in those of the ovary. The results of vaginal examination, the solid tumour, the altered condition of the lower segment of the uterus, the absence, or at least the impossibility of discovering, the os uteri, unless it were

represented by the small depression which I have mentioned, and lastly, the result of puncture with the exploring needle, all seemed to warrant the conclusion that the tumour was uterine, and not ovarian.

I have related the case thus fully, in order to illustrate the nature of the difficulties that we sometimes encounter in forming a diagnosis, and also the kind of evidence for which we must seek in order to remove our uncertainty.

Another deviation from the ordinary characters of the disease is seen when its symptoms set in with great suddenness, those symptoms being generally either hæmorrhage, or retention of urine. The sudden hæmorrhage is sometimes assumed to be due to miscarriage, and this upon grounds as slender as a mere impression upon the patient's mind that she was pregnant, often indeed a hope, rather than a belief, that this was the case. The great safeguard against this class of mistakes consists in never taking a patient's statement as to the existence of pregnancy for granted, but in always questioning her closely with reference to the date of her previous menstruation, and the evidence of her alleged condition; and if this be done, it will not infrequently turn out that an assertion made most positively, is nevertheless unsupported by a single tittle of proof. But further, the hæmorrhage excited by a fibrous tumour is usually more profuse than that of an early abortion; is often unattended by pain, while, when pain is present, it is not of the same kind, nor do the pain and the bleeding cease at the same time as they do when miscarriage has occurred. The causeless return of the bleeding in cases of fibrous tumours, generally removes the doubt which might have been felt; while if an examination be made per vaginam, though in both cases the womb will be heavier than natural, yet the developed lips of the os, its patulous condition and soft texture, after a recent miscarriage, differ much from the firm tissue of the neck of the womb in the other case, its undeveloped lips, its small and scarcely open orifice.

The other mode in which the symptoms sometimes suddenly manifest themselves is in the supervention of great difficulty in

voiding the urine, or in the occurrence of retention of urine such as to necessitate the use of the catheter.

The occasional retention of urine is an occurrence by no means infrequent, independent of organic disease, in women of a hysterical temperament, and cannot of itself be regarded as characteristic of any one affection in particular. It is, however, well to bear it in mind as being sometimes the first indication of the existence of fibrous tumours of the uterus, while both it and dysuria, and very frequent micturition, are very rare attendants upon ovarian tumours, except in those cases in which both ovaries are affected, and one occupies the pelvis, while the other fills the cavity of the abdomen. The reason for this difference between ovarian and uterine tumours is, I believe, to be found in the tendency of the tumour of the ovary to rise out of the pelvic cavity, while the fibrous tumour of the uterus still continues in its original situation ; and, as it enlarges, either presses against the neck of the bladder, or carries the uterus more and more forwards till it comes to press upon that organ, to irritate it, and even mechanically to interfere with the discharge of its contents.

This interference with the functions of the bladder is especially remarkable in those rare instances in which the tumour proceeds from the anterior surface of the uterus ; and I relate the following case both in illustration of this fact, and also of another to which reference has already been made, namely, to the manner in which some unwonted cause of uterine congestion may at once call into painful distinctness a train of symptoms previously little felt, perhaps even scarcely suspected.

A woman, aged thirty-five, married for eleven months, but who had never been pregnant, was admitted under my care in December 1852. Previous to her marriage, habitual dysmenorrhoea had been the only form of ill health from which she had suffered, but since then she had been troubled with frequent desire to pass water, and constant aching pain in the loins, aggravated by walking. The urine was either natural, or else throwing down a precipitate of the lithates. The case seemed at first as though it were simply one of uterine congestion after marriage, and local

Leeching brought slight and temporary relief to the symptoms. On examination per vaginam, however, the os uteri was found to be directed very much backwards—it was very slightly open; while a tumour of a rounded form was distinctly felt in front of the cervix, pressing immediately against the bladder, and the sound introduced into the bladder encountered this same obstacle to its introduction, which was overcome only after a little manipulation, though no evidence was obtained at any time of the existence of disease of that organ. The position of the os uteri, and the circumstance of its almost complete closure, while in cases of flexion of the womb it is nearly always open, were two of the reasons which led me to regard the case as one of uterine tumour, not of ante flexion of the uterus. In other instances of tumours of the anterior uterine wall, I have observed a nearly equal degree of irritability of the bladder, but coupled with hæmorrhage and other characteristic symptoms of fibrous tumours of the uterus, which in this case were absent.

The discrimination between fibrous tumours of the posterior uterine wall and retroflexion of the uterus, is often attended by at least as much difficulty as that between the two opposite states of ante flexion and tumour of the anterior wall. These cases illustrate one remarkable fact to which reference has already been made when I was speaking of flexions of the uterus, namely, the want of any constant relation between the amount of mechanical pressure on the rectum, and the degree of difficulty in defæcation. Sometimes, indeed, the presence of a tumour so large as almost completely to fill the cavity of the pelvis, will be attended by scarcely any difficulty in the expulsion of the fæces, while in another case, a growth of but small size will be accompanied by pain and difficulty in emptying the bowel, and the presence of mucus in the evacuations will give unmistakeable proof of the irritation to which it has given rise. The comparatively slow growth of a fibrous tumour, and the time consequently given for the adaptation of parts to their new relations, no doubt goes far to explain the general absence of any serious difficulty in defæcation; it occurred only in two of the

forty instances on which my remarks are founded. Nothing, however, is more variable than the amount of pain attendant upon uterine ailments; and causes acting through the medium of the general system, as well as others more local in their action, will not infrequently excite an intensity of suffering from some disease of the womb which had existed for months or years before without occasioning severe pain, perhaps even without producing serious inconvenience.

Neither the amount of pain, nor the degree of difficulty in defæcation, can be taken as affording any clue to the solution of the question, whether we have to do with a retroflected womb, or with a fibrous tumour of the posterior uterine wall. The exact relations of the tumour, the fact of the tissue of the cervix uteri passing over into that of the tumour,—a characteristic of flexion of the womb which the experienced touch will generally be able to appreciate,—the state of the os uteri, and the results of the introduction of the uterine sound, which will remove the misplacement and inform us of the weight of the uterus (supposing always that we can introduce it, though that is sometimes impracticable), are generally sufficient to keep us from error. In spite of all care, however, we may sometimes meet with cases in which we shall find it a most difficult matter to arrive at a certain diagnosis. Need I say that the importance of a correct diagnosis consists, in these cases, not in its leading us to the adoption of any special plan of treatment, but rather in its enabling us to remove much needless anxiety, to assure our patient that there may be some misplacement of the womb, but that there is no disease tending to go on from bad to worse, and possibly, nay even probably, to conduct her through a lingering illness to a premature death.

The history alone of fibrous tumour may often raise the suspicion that the patient is affected with cancer, for pain and hæmorrhage may both be present, and the health may give way under their continuance, while it needs but inattention to cleanliness, and the allowing the coagula to remain in the vagina and decay there, in order to produce the third symptom,

—offensive discharge, which is so often looked upon as almost pathognomonic of malignant disease of the womb. A vaginal examination, however, seldom fails to clear up all uncertainty; so little is there in common between the small os, the thin and undeveloped lips which coexist with fibrous tumour, and the gaping orifice, with the thickened, hard, irregular, and nodulated lips that characterize cancer of the womb.

Error, however, is still possible, and Dr. Montgomery, in his valuable paper to which reference has already been made, mentions some instances in which the pressure of a fibrous tumour just about to project through the os uteri against the lower segment of the womb, and the consequent alteration in the condition of the cervix, had led to the mistaken supposition that cancer existed. Care ought to prevent you, I think, from falling into this mistake. More difficult, however, is the diagnosis between cancer of the body of the uterus and fibrous tumour of the organ; and the risk is considerable, in spite of much watchfulness, of your taking the more for the less serious disease. When speaking of cancer of the womb, I shall shortly have occasion to refer again to this subject. At present it may suffice to say that the more rapid progress of the malignant disease, the persistence, though not of necessity the greater abundance, of the hæmorrhage, and the want of mobility of the uterus, though its size be not such as to occupy completely the pelvic cavity, are some of the more important characters by which we may usually recognise that rare affection—cancer of the body of the womb.

Though not likely to induce any positive error of diagnosis, there is yet another deviation from the ordinary symptoms of fibrous tumours of the uterus which calls for some notice. It happens now and then that they are accompanied by attacks of pain of such intense severity as to be almost unbearable, the pain being evidently neuralgic in character, ceasing abruptly, returning causelessly, and being but little amenable to any kind of treatment. These attacks do not seem to be dependent on the size of the tumour, or its situation, and are certainly not

connected with any special pressure exerted by it on any organ, or any set of organs. In one case, in which it continued for years to return occasionally, a sense of weight and burning referred to the womb being experienced in the intervals, the tumour was imbedded, as far as could be ascertained, in the posterior uterine wall. Menstruation was irregular but profuse; its occurrence had no influence either in increasing or in lessening the uterine pain. The patient was at different times under my care with little benefit, and many trials were made of preparations of iodine, without her being able to continue the remedy. At length, after the lapse of four years, she became able to take iodine without the disturbance of health which it had previously occasioned, and after about six weeks' continuance of it, both the abiding and the paroxysmal pain were greatly lessened, though the condition of the tumour remained unaltered.

The other case was one of a still more remarkable character. A stout, tolerably healthy looking woman, but whose somewhat bloated face confirmed the suspicions which her calling as the wife of a publican excited, presented herself one morning at the out-patient room of St. Bartholomew's Hospital. At that time her appearance and manner presented every sign of most intense agony; drops of perspiration stood on her forehead, her skin was cold and clammy, and her pulse feeble. With these manifestations of extreme suffering, there were associated a disposition to weep, and also a good deal of *globus hystericus*. After being some little time in bed, the intense pain subsided, and she then gave the following account of herself:—She was thirty-three years old, had been married seventeen years, had given birth to one live child at the eighth month, and had miscarried three times at early periods; twelve years having elapsed since her last miscarriage. The catamenia had always been regular in their return, but for the last two years the discharge had been more profuse than before. For sixteen years she had had occasional attacks of pain similar to those from which she suffered when she came under my notice, but the attacks had always been mitigated by cupping and leeching. For eight

years, however, the pain had returned regularly immediately after the cessation of menstruation, and had continued for about a week after each period, the paroxysms returning every two hours, and lasting from half an hour to an hour. Her health was generally best for a week before, and sometimes during, menstruation, though the pains had greatly increased in their severity, and were sometimes brought on by exertion, or sexual intercourse, while rest in the recumbent posture always relieved them. The patient complained besides of a sort of cramping pain during micturition, and of difficult defæcation, as if from some substance contracting the passage for the fæces. When the pain came on she sat up in bed, swaying herself from side to side, weeping loudly, complaining of pain like the throes of labour, and also of a choking sensation, all of which subsided by degrees in the course of about half an hour. The abdomen was full; its size, which was considerable, was partly due to fat with which the integuments were loaded; on laying the hand upon it, spasm of the abdominal muscles was immediately excited; and this for some minutes prevented the attempt to determine whether any tumour was seated there or not, though after a time this was settled in the negative. The uterus was situated low down in the axis of the pelvic outlet; its anterior lip was three-fourths of an inch longer than the posterior; the tissue of the cervix was healthy, the os circular and slightly open. Behind, and to the left of the uterus, and extending also slightly in front, was a firm uneven nodulated tumour, tender on pressure, connected, though apparently not very intimately, with the uterus, but which was ascertained by repeated examinations, and by evidence of the uterine sound, which ascertained the cavity of the organ to be four inches and half long, to be in reality an outgrowth from the womb, and not a tumour simply connected with its appendages.

At first quinine was given in large doses and at short intervals, but with little effect; and I may state my general impression that quinine oftener fails to arrest uterine neuralgia than to relieve pain seated in other systems of nerves. Afterwards the

pain was kept in check by opium, and the patient left the hospital relieved, but not more than might be expected from quiet, a regulated diet, and the anticipating each attack of suffering by appropriate treatment.

The most frequent and the most important exceptional peculiarities of these growths have now been passed in review ; but reference ought perhaps to be made to the distinction between fibrous tumours and pregnancy, and to the discrimination of pregnancy when it co-exists with tumours. Of the two, I believe the latter to be far the more difficult ; and, indeed, when we find the womb obviously enlarged by fibrous outgrowths, it is almost a pardonable error to attribute to them the whole increased bulk of the organ, and to lose sight of the possibility of a physiological cause having a share in the production of the enlargement. No direction can be laid down such as will always keep from error : the best safeguard is, perhaps, to be found in our making it a rule for our guidance in every case of doubtful tumour, to prove the non-existence of pregnancy before advancing a step further in forming a diagnosis. It is to be remembered, sadly strange as it may seem, that there is scarcely any disease, however formidable or however loathsome, in spite of which sexual intercourse and conception may not take place. Vesico-vaginal fistula, the most repulsive disease of the external organs, cancers of the vagina or of the uterus, are far from proving the bar to cohabitation that might be expected ; a cohabitation often on the woman's part submitted to with pain of body and anguish of mind ; for, indeed, it is in her sex, much less often than in our own, that "the Centaur not fabulous" finds its aptest illustrations.

Reference has already been made to the different condition of the womb in pregnancy, from that which it presents when enlarged by fibrous tumour ; and the dissimilar state of the lips and orifice of the womb, and the different consistence of its enlarged lower segment, will generally suffice to keep the attentive observer from error. It is, indeed, from relying on the evidence furnished by some one or two symptoms of pregnancy,

and not taking into due consideration the counterproof afforded by other symptoms, that mistakes are almost always committed. The uterus is found enlarged, and its lower segment expanded; movements supposed to be foetal, are felt by the patient, and a sound resembling the uterine souffle is perhaps detected, and the existence of pregnancy is at once assumed; no account being taken of the occurrence of hæmorrhage, of the non-development of the uterine lips, and of those other phenomena which ought to have excited suspicion, which duly weighed might have at once proved the case to be merely one of uterine tumour. It is well to bear in mind that, although always of rare occurrence, it yet happens more frequently in cases of fibrous tumour than of any other uterine ailment, that a sound is perceptible closely resembling the uterine souffle, or absolutely identical with it in character, and corresponding with it in situation, and in the extent of surface over which it is heard.* The caution which this fact suggests must not be lost sight of in any case of doubtful pregnancy.

The complication of fibrous tumour with pregnancy may interfere very seriously with the detection of that condition, partly by the misplacement of the womb which it frequently produces, the consequent alteration in the form of the organ, and the difficulty that it may give rise to in attempting to reach the os uteri; and partly by the impediment which the deposit itself may offer to the occurrence of the physiological changes in the orifice, neck, and lower segment of the womb.

Not long since a case was under my observation in the hospital, in which I overlooked the existence of pregnancy; and I will relate to you some particulars of it, as illustrating the circumstances that may conspire to throw you off your guard, and to obscure almost completely the usual symptoms of pregnancy.

A woman, aged thirty-eight, who had been married twelve

* In Walter's remarkable case, to which reference has already been made, a loud souffle contributed for a time to obscure the diagnosis. Several instances of loud uterine souffle coexisting with uterine tumour, and independent of pregnancy, are related by J. A. H. Depaul, *Traité d'Auscultation Obstetricale*, 8vo, Paris, 1847, pp. 209—222.

months, but had never been pregnant, stated that she had had tolerably good health, and had menstruated regularly until seven weeks before she applied for admission, when the discharge suddenly ceased after exposure to cold. Four months before I saw her she first perceived a hard, painless swelling, about the size of an egg, below and to the right of the umbilicus, and this increased till it had attained half its subsequent size, without any disturbance of her health. Since the cessation of her menses, she had suffered from pain in the back and loins, which, slight at first, had by degrees become very severe, and had at length compelled her to seek for medical advice. Leeching and rest had relieved her pain, but the tumour gradually increased in size. Three weeks before her admission, a discharge, said to be menstrual, again made its appearance, and continued for a week, when it ceased for two days, but then returned, and was still going on when the patient came under my care.

The abdomen was occupied by a tumour, which was not symmetrical, but more prominent on the right than on the left side of the umbilicus, reaching up to about its level, extending to within about an inch and a half of the left crista of the ilium, and completely occupying the right iliac region. It was hard, unyielding, seemed about the size of an infant's head; was tender on pressure upon its most prominent part. On examining per vaginam, the finger came at once upon a spherical body, occupying the posterior half of the pelvis, and pressing the neck of the womb closely against the symphysis pubis. This tumour, which was firm though somewhat elastic, began immediately behind the cervix uteri, which was about half an inch long, the lips soft, and the os open enough to admit the finger, which, as far as it could reach, felt no closure of the cervical canal, nor any mucous plug occupying it.

After the patient's admission, there was very little hæmorrhage from the uterus, but she had frequent attacks of very violent pain of an expulsive character. Opiates mitigated the severity of these attacks and controlled their frequency, and at the end of a month the patient left the hospital much relieved, her

abdomen measuring thirty-three inches at the umbilicus, as on the day of her admission.

A month after she left the hospital, she was prematurely confined of a still-born child at about the sixth month of utero-gestation, and her recovery after her labour was retarded by an attack of uterine inflammation, of which the patient spoke as having been very severe. Nine weeks after her delivery I again saw her, and found her uterus low down and fixed in the pelvis, the enlarged, elongated, and much thickened cervix being closely in apposition with the anterior pelvic wall, while a large tumour connected with, and growing out of the posterior uterine wall, completely filled the pelvic cavity, and greatly contributed to the immobility of the organ.

It were time wasted to dwell at length on the causes which rendered the diagnosis of pregnancy so difficult in this case, or which indeed prevented any suspicion of it being entertained. Unsuspected by the patient herself, some of its symptoms were doubtless unnoticed by her; while the continuance of a discharge like that of the menses, its subsequent suppression for a short period, its re-appearance and persistence for three weeks before she was received into the hospital, all seemed more like the evidences of disease than any of the ordinary results of pregnancy. Examination, too, detected a tumour occupying the pelvic cavity, and which was clearly a fibrous outgrowth. This very tumour prevented the ordinary changes in the lower segment of the uterus from taking place, and thus led to the belief that uterine disease, and disease alone existed. You know, however, that a correct diagnosis implies, not simply the discovery of the patient's disease, but the formation of a right judgment concerning that patient in all respects. The public feel as little respect for an incomplete diagnosis as for one that is altogether wrong.

It is not possible with reference to any disease whose progress is so variable and course so uncertain as that of uterine fibrous tumour, to make any general statement concerning the *prognosis* which we should form, for the contingencies are very numerous by which the patient's condition may be modified.

Thus much, however, may be stated : that apart from the risks attendant on pregnancy and labour, fibrous tumours do not tend generally, nor ever rapidly, to the destruction of life, though they undermine a person's health, and must often make her an easy prey to any intercurrent disease. In one only out of the forty cases on which these observations are based did the patient die of hæmorrhage, and the fatal event in this instance occurred nine years after the appearance of the first symptoms of the disease ; while in the other two fatal cases death was due to uterine and peritoneal inflammation after delivery. The subjoined table, which shows the duration of the symptoms at the time when the patients first came under my observation, illustrates the comparatively slow course of the affection.

The symptoms had lasted less than . . .	1 year	in	6
„ „ between 1 and 2 years „	4	„	4
„ „ „ 3 — 4 „	„	„	8
„ „ „ 4 — 5 „	„	„	6
„ „ „ 5 — 6 „	„	„	1
„ „ „ 6 — 7 „	„	„	3
„ „ „ 7 — 8 „	„	„	1
„ „ „ 8 — 9 „	„	„	2
„ „ „ 9 — 10 „	„	„	3
„ „ 10 „	„	„	1
„ „ 11 „	„	„	1
„ „ 12 „	„	„	1
„ „ 16 „	„	„	1
„ „ 20 „	„	„	1
		In	1

who died after delivery, the existence of the tumour was not suspected till labour took place.

Total 40

Unlike, then, any form of malignant disease, uterine fibrous tumour shows no constant tendency to advance or increase ; and if we are compelled to allow that medicine furnishes no certain means by which to arrest its growth, and that surgery can but seldom be called to our aid, it is yet a consolation to be able truthfully to assure our patient that the much dreaded ailment is yet less formidable than it was supposed to be, much less so than it has often been represented.

I purposely, however, excepted one contingency when men-

tioning the comparatively small risk to life from fibrous tumour of the uterus, and spoke of the disease apart from the dangers that attend upon it when associated with pregnancy, labour, and the puerperal state. We have already seen that the existence of fibrous tumours in the uterus lessens the chances of conception, and it is fortunate that it does so, for the increased afflux of blood towards the womb which pregnancy brings with it, is seen to accelerate the growth of any tumour connected with that organ. Pregnancy, indeed, when it does take place, often has a premature termination; for the presence of a tumour in the wall of the uterus interferes with its regular development, and thus in many instances abridges the term of gestation. Not long since a patient was under my care, in whom the existence of a tumour, imbedded in the left wall of the uterus, was ascertained soon after the occurrence of an apparently causeless miscarriage. Four other miscarriages have since successively occurred, and no other reason can be assigned for them than that which the uterine tumour suggests.

But there are greater evils than either sterility or the premature termination of pregnancy, to which patients affected with fibrous tumours of the uterus are liable. The annals of medicine are full of cases illustrating the dangerous character of this complication, which may expose the patient to one or all of three different perils. The tumour may mechanically prevent the passage of the child through the pelvis, and may thus even necessitate the performance of the Cæsarean section. It may interfere with the efficient contraction of the uterus after the expulsion of the placenta, and thus expose the patient to hæmorrhage which it will be very difficult to control. Or lastly, it may interfere with the processes of involution of the womb after delivery, and may either itself undergo a morbid softening and disintegration, or may be the occasion, either in connexion with inflammation of its own substance and of that of the womb, or independently of them, of peritonitis always dangerous, too often fatal.

While I believe the risk of any of these untoward occurrences complicating labour to be very real and very serious, it is

nevertheless my impression that the danger has been overstated by some writers of very deserved reputation. There can be no doubt but that the peril depends in great measure on the intimacy of the relations between the tumour and the uterine substance ; and that those pediculated outgrowths which spring from the peritoneal surface of the uterus are of no great moment except in so far as by their size or position they encroach on the pelvic cavity, and interfere with the passage of the child. I know three women, one of whom has given birth to one child, the others to several, from the fundus of whose uterus there springs a tumour having all the characters of a fibrous outgrowth ; and yet, with the exception of some disposition to hæmorrhage in two of the cases, (and that indeed by no means difficult to restrain,) labour and its consequences have been uninterrupted by any untoward occurrence. Even in other cases, the exceptions to an unfavourable issue are far too numerous to warrant us in admitting the disposition to disintegration and softening or suppuration of the tumour, to be as invariable an attendant on advanced pregnancy as some writers suppose. My own experience, too, leads me to connect the fatal issue, when it does take place, more with peritoneal inflammation than with any constant change in the substance of the tumour ; while lastly, it is not to be forgotten that the softening and disintegration of fibrous tumours, when they occur in the unimpregnated condition, are not attended by any formidable symptoms.*

The bearing of these facts on the question of the induction of premature labour in pregnancy, complicated with fibrous tumours of the uterus, must be reserved till after I have said what little there may be to tell you with reference to the general treatment of the disease.

* With reference to this subject and the practical questions connected with it, the reader may consult Puchelt, *De tumoribus in pelvi partum impediētibz*, 8vo, Heidelbergæ, 1840, cap. i. ii. v. pp. 58, 66, 104 ; Ashwell, *Guy's Hospital Reports*, vol. i. p. 300 ; Lever, *ibid.* vol. vii. pp. 98 — 103 ; and some remarks by Dr. Simpson, which first appeared in the *Edinburgh Monthly Journal*, August, 1847, and are republished at p. 833 of vol. i. of his collected *Obstetric Works*, 8vo, Edinburgh, 1855.

LECTURE XVII.

UTERINE TUMOURS AND OUTGROWTHS.

FIBROUS TUMOURS. Treatment. Precautionary measures to retard their growth ; management of menstrual periods, and palliative treatment. Alleged specifics, iodine, bromine, the waters of Kreuznach. Surgical proceedings ; great hazard attending them. Sources of danger, and management of pregnancy and labour complicated with fibrous tumours.

FIBROUS POLYPI ; their structure, vascular supply, and source of hæmorrhage which attends them. Their symptoms. Operations for their removal ; comparative merits of ligature and excision. Management of labour complicated with polypus.

FATTY TUMOURS OF UTERUS.

TUBERCULAR DEGENERATION OF UTERUS. Its characters, seat of the disease ; and connexion with general tuberculosis.

WE now come last of all to the consideration of the *treatment* of fibrous tumours of the uterus. The treatment, indeed, of an irremediable disease may seem to require but brief notice, and to present but slender interest to the student of medicine. But in fact it is not so. There are as large opportunities for skill in palliating the irremediable ill, as in curing the sickness which gives the widest scope for the healing art to show itself most sovereign ; and there are occasions, too, far more numerous, for the exercise of all those sweet charities of life which render our profession in its right exercise so unalloyed a blessing to mankind. Hereafter I shall have to plead the same reasons for begging your most heedful attention to the management of cancer, and of other ailments more hopeless, more constantly, more quickly fatal than that which we are now studying. I urge them on you now, however, because there is a not unnatural disposition on the part of the student and the young practitioner to fix their attention on the great diseases which admit of great remedies, and to pass almost unnoticed the slow, wear-

ing ailments, in which each day's suffering is like that of the day before ; with no prospect indeed of return to health, but with a decline so tardy, marked by so few events, that the shadow on the dial seems scarcely to go down at all.

Fortunately, in the present case, the disease often has pauses in its course, which, though uncertain alike in their occurrence and their duration, are yet frequent enough to lend a little brightness to the patient's prospects. These, too, are still further cheered by the rare accident of a perfect recovery being now and then brought about by nature's hands ; while concerning it we can predicate so little, that every patient may with almost equal reason hope that she herself will prove the happy exception to the general rule.

We have already seen enough of the conditions which favour the development and growth of fibrous tumours, to be able to infer the nature of those precautions by which their increase may be retarded. We find their growth to be more rapid, and their symptoms generally to be more formidable, during the years of sexual activity, than after the time when those functions have ceased ; while pregnancy and its consequences are not only attended by certain positive dangers, but appear to be accompanied by a greatly accelerated rate of increase of the disease. Hence it may be regarded as a fortunate circumstance when the symptoms of this affection come on comparatively late in life, and we then venture to hold out to our patient the expectation of amendment taking place when menstruation ceases. Hence, too, a more encouraging prognosis may usually be expressed in the case of an unmarried woman, or of a widow, than of one who is still cohabiting with her husband. Apart indeed from the occurrence of pregnancy, there can be no doubt but that mere sexual intercourse is injurious to patients with fibrous tumour, and that the congestion of the uterus and pelvic viscera, and the increased vitality of the sexual organs which the act induces, favour its increase. If then your patient be a married woman, it is your duty to acquaint her with this fact : it is not generally your duty to do more ; for often there are

complicated questions both moral and physical involved, which you must not ignore, but into which, unasked, you have no right to intrude.

But while you must to a great extent leave this matter to be settled by your patient, there are some other points concerning which your advice cannot be out of place. Independent of the risks of hæmorrhage which attend it, the menstrual period is always unfavourable to this class of patients, and the more quietly you can succeed in conducting them through it the better. Absolute rest through the whole of each period is of great importance; while, if much hæmorrhage or severe pain accompanies it, the patient should remain in her bed for the first forty-eight hours, and should not move further than to her sofa during the whole of its continuance. If it sets in with severe pain, associated, as is usually the case, with abdominal tenderness, a few leeches over the hypogastrium, or the tender part of the tumour as felt through the abdomen, will often be of service, but the caution which I have already given as to the inexpediency of leeching the uterus just before the commencement of a menstrual period, holds good in this case. Both the pain and also the hæmorrhage are often much lessened, not only by keeping the bowels acting with regularity at all times, but also by giving an aperient just before the discharge commences. If menstruation should be very excessive, the case must be treated just like any other case of menorrhagia, and in anticipation of profuse loss of blood, astringents may be employed from the very first day of the discharge appearing. Not infrequently there is a disposition to intercurrent hæmorrhage between the periods, which may in many instances be warded off by complete rest at the time, by the avoidance of all stimulants, by salines and sedatives, such as the citrate of potash with tincture of henbane, and by the application of a few leeches to the abdomen, if the threatenings of loss of blood are accompanied with much pain. I do not think that in cases of fibrous tumour of the uterus, very much is gained by the application of the leeches directly to the womb itself, though in simple hyper-

trophy of the organ that constitutes our most efficient mode of treatment. Sometimes, however, when menstruation is scanty, and as is then generally the case, painful; or when there is much uterine tenderness, and a puffy or indurated condition of the cervix, much is obtained by this measure. I believe, however, that then it is the general state of the uterus, rather than the tumour of the organ, which is benefited. Much standing, much exertion, and especially much walking, are all objectionable, for all tend to produce and to keep up a congested state of the pelvic viscera. If these, however, be interdicted, and the patient be thereby condemned to a sedentary life, it is obvious that to maintain her health she must adopt a mild, unstimulating diet, that she must live more simply, even more abstemiously than before. On the degree to which you can command your patient's confidence, and can induce her to adopt this somewhat self-denying kind of life, and on the extent to which she has fortitude to persevere in it month after month, even year after year, will depend the measure of her health, her comfort, and her powers of usefulness.

It would profit but little to repeat all that has been said before when treating of dysmenorrhœa and of excessive menstruation; for the rules then given and the remedies then suggested apply equally to the mitigation of pain or the suppression of bleeding when dependent on fibrous tumour. It may not, however, be superfluous to add that the steady observance of the hygienic rules which I have laid down, is of more importance than the mere use of medicines for the permanent mitigation of either of these symptoms.

But it may be asked whether there is no remedy that exerts a specific influence on the growth of these tumours—none by which we can obtain their absorption, or at least feel sure of putting a stop to their growth? I very much fear that no such remedy exists, or at least has been at present discovered. Mercurial preparations most certainly have no such influence; and the alleged powers of iodine seem to have been very much overrated, for in a very large proportion of the instances in which it

has been perseveringly employed, no effect whatever has appeared to follow its administration. The disintegration of the tumours, and their expulsion, have never in my experience succeeded the continued use of preparations of iodine, but have taken place unexpectedly, and independent of any assignable cause. Still it is my belief that the rapid increase of these growths is sometimes restrained by this agent, and I am therefore accustomed to employ it as our best, though but an uncertain remedy. To gain anything by it, however, it has seemed to me essential that its use should be continued for many months; and, in order to this, the patient must be brought very gradually under its influence, since large or frequently repeated doses often disorder the digestion, occasion sleeplessness, or produce a febrile condition, which compels the discontinuance of the medicine. I seldom give more than one grain of the iodide of potass with twenty minims of the syrup of iodide of iron, twice a-day, and though in addition I generally recommend the inunction of an iodine ointment over the tumour, yet this is rather as an additional means of impregnating the system with iodine than on account of any marked local influence which its employment in this manner has seemed to me to exert. The introduction into the vagina of balls of iodine ointment, for the sake of the supposed local action of the remedy on the tumour, does not appear to me to have evidence in its favour sufficient to counterbalance the obvious disadvantages attendant on constant local medication of the womb, and the daily introduction of irritants into the vagina. The same kind of objection, with the additional drawbacks attendant on the proved inefficacy of mercurials, attaches to the local use of the unguentum hydrargyri, and its injection, as has been recommended, into the cavity of the womb.

The bromide of potassium has been spoken of as of superior efficacy to the salts of iodine; but the evidence on the subject is of that vague kind on which the temporary reputation of so many remedies in chronic diseases is founded; and I have no adequate personal experience on the subject. The mineral waters of

Kreuznach in Germany,* however, which contain both iodine and bromine, have acquired, and apparently with justice, considerable reputation for the special influence which they exert over enlargements and fibrous tumours of the uterus. These waters are both taken internally, and are also used in the form of baths or hip-baths composed of the *mother lye*, or liquid which remains after evaporation of the water (and which contains from seventeen to twenty-six grains of iodine in every sixteen ounces†), diluted to various degrees of strength, and employed for a period of from fifteen to forty-five minutes every day. Now it is an extremely difficult matter to judge in cases of this description how far the patient's recovery is due to the supposed great remedy, how far to those subsidiary measures which I have already referred to as of such great moment, and which are never likely to be so strictly attended to as when a person leaves her home in search of health, and places herself for some months under the care, not of an ordinary practitioner, but of one who seems to preside as a sort of genius of the place over the wonder-working spring. It seems, too, from the statement of Dr. Prieger himself,‡ a gentleman who practises at Kreuznach with well merited reputation, and who first brought its waters

* Dr. Sutro, in his work on the *German Mineral Waters*, London, 1851, gives at page 256, the following result of an analysis by Professor Löwig, of Zurich, of the contents of sixteen ounces of the water :—

72·88	chloride of sodium
13·88	„ calcium
4·07	„ magnesium
0·62	„ potassium
0·61	„ lithium
0·27	bromide of magnesium
0·03	iodide „
1·69	carbonate of lime
0·01	„ baryta
0·10	magnesia
0·15	oxide of iron
0·02	phosphate of alumina
0·12	silica
<hr/>	
94·02	

† As stated by Dr. Engelmann, *The Baths of Kreuznach*, 8vo, Frankfort, 1852, p. 6, note.

‡ *Monatschrift f. Geburtskunde*, vol. i. March, 1853, p. 197.

into general notice, that by far the greater proportion of recoveries occur in cases of simple hypertrophy of the uterus, and not of fibrous tumours of the organ. But to what extent soever these facts may be fairly regarded as real drawbacks from the value of the Kreuznach waters, they are still a valuable remedy, and deserve a trial in every instance where the patient's means admit of it. Fortunately, too, the Kreuznach waters can be imported into this country without any very serious impairment of their virtues, so that a fair trial of them may be made without any considerable expense.

If medicine, however, is so slow, and confessedly so uncertain in its action upon these growths, are they, you may inquire, equally beyond the reach of surgical interference? Such of them as spring from a distinct pedicle, and hang down into or beyond the uterine cavity, admit of removal either by the knife or the ligature; and concerning these fibrous polypi I shall have something to say presently. The non-pediculated growths with the study of which we are now occupied, and those pedunculated tumours which spring from the outer surface of the uterus, are almost or altogether beyond our reach. A few cases are on record in which the abdomen has been laid open, and in which the extirpation of a fibrous tumour from the outer surface of the uterus has been attempted, and even actually accomplished. In most of these cases the operation was undertaken with the impression that the tumour was ovarian, and in all instances but one, which is reported by an American surgeon, Dr. Atlee, its completion was followed by the patient's death. It is a proceeding to be altogether deprecated, difficult to accomplish, almost certainly fatal if concluded, surrounded by dangers which wisdom cannot foresee, nor skill avert.

It would perhaps not be right to pass quite so sweeping a condemnation on another operation which, since its first performance by M. Amussat has had a few imitators, and which consists in the enucleation of fibrous tumours of the uterine walls by an incision made through the os uteri, or the lower segment of the womb. No one can have noticed the

extremely loose connexion between the uterus and fibrous tumours imbedded in its substance, without the feasibility of an operation for their removal occurring to his mind, and it was suggested, on theoretical grounds, by M. Velpeau, some years before the idea was put in practice in 1840 by M. Amussat. The results of it, however, are by no means encouraging, for I find a total of eight deaths to four or five recoveries.* If now to the published mortality we make some addition for suppressed, or at least non-reported cases, we arrive at a result which compels us to class the operation among the most hazardous in surgery. These risks, too, be it observed, are incurred not in the case of a disease surely and rapidly destroying life, but of one that runs a slow course, that often comes to a standstill of its own accord, and that almost always affords a prospect of

* The following references include all the cases with which I am acquainted where this operation has been performed.

Successful cases—

By Amussat . . . 2 cases, reported in full in *Examineur Médicale*, Feb., 1843.
 „ Pancoast . . . 1 case, „ *Boston Med. Journal*, Oct. 9, 1844.
 „ Maisonneuve 1 „ „ *Bulletin de l'Académie de Médecine*, xiv. 272.
 „ Teale, of Leeds 1 „ „ *Braithwaite's Retrospect*, xxviii. p. 383, from *Medical Times*, Aug. 20, 1853. It is open to question whether this case should be included among the number, since the presence of a sort of pedicle facilitated the operation, and removed it, at any rate in a measure, from the category of cases of enucleation of the tumour.

Fatal cases—

Boyer . . . 1 case, *Revue Médicale*, March 1845, patient died in six days.
 Bérard . . . 2 cases, *Bull. de la Société Anatomique*, 1842, p. 82, died in three weeks.
 Jarjavay . . 2 cases, *Des opérations aux corps fibreux de l'utérus*, Thèse de Concours, Paris, 1850, died in two days.
 Maisonneuve 1 case, *Gaz. des Hôpitaux*, December 10, 1849, died in one month.
 Chiari . . . 1 „ *Clinik der Geburtshülfe*, &c., p. 408, died in thirty-six days.
 Simpson . . 1 „ *Ed. Monthly Journal*, March, 1848, and republished in the *Obstetric Memoirs*, p. 118, died in six days.

This is, I believe, the only fatal case of Dr. Simpson's published. Dr. Arneth, of Vienna, however, in his *Impressions of a Journey*, published in the *Wiener Zeitschrift*, viii. 3, 1852, and Schmidt, vol. lxxv. p. 323, say that Dr. Simpson had had four cases, three of which terminated fatally; and that he therefore dissuaded from the performance of the operation. It is to be regretted that Dr. Simpson's *Obstetric Memoirs* have had so little of his supervision as to contain no account of those failures in this or in other cases, which no skill can prevent, which are known to have modified his own practice, and which might afford lessons so well worth learning to others.

months or years of valetudinarianism indeed, but still of life, which the operation may cut short in a few days. Success, on the other hand, by no means necessarily frees the patient from her ills, for fibrous tumours are but seldom solitary, and the removal of one may but serve to bring to light the existence of another beyond the reach of surgical interference.

In the performance of the operation itself, the main difficulties seem to arise from the size of the tumours, the inadequate space afforded by the opening of the os uteri, and the extreme thinness of the uterine parietes, which necessitates the most cautious manipulation, lest the peritoneal cavity should be opened in the endeavour to extract the tumour. It must, indeed, be impossible for any one to read the particulars of operations such as those of Amussat and Boyer, where the patient was more than two hours under the hands of the surgeon ; or of that of Maisonneuve, in which the hæmorrhage that immediately followed it was very alarming, without feeling much hesitation as to the propriety of exposing a person to so great a risk for advantages so uncertain. Nor, indeed, is the immediate danger that which alone has to be encountered, for the supervention of inflammation afterwards is very far from unusual, and both of Amussat's patients, and one of Maisonneuve's, though they eventually recovered, were very ill for a time from this cause.

One exception, however, ought perhaps to be made to the rule which pronounces the operation on non-pediculated growths to be generally inexpedient, and that is in cases where a portion of the tumour, having already widely dilated the os uteri, has passed beyond it into the vagina. The operation here would seem to stand on much the same footing with operations on pedunculated tumours or polypi ; and the details of the case in which Dr. Pancoast removed a tumour with success, or of that more recently reported by Mr. Teale, of Leeds, appear to bear out the correctness of a supposition which has all theoretical probabilities in its favour.

In conclusion, and before taking leave of the subject of fibrous tumours, a few remarks must be made on the management of

cases in which they occur as complications of pregnancy or labour. It happens occasionally, as in a case which some years since came under my own observation, that the pelvic cavity is found at the commencement of labour occupied by a large and firm tumour, the existence of which had not been betrayed previously by any symptoms whatever of uterine disease. In some of these cases, the Cæsarean section has been performed, but I am not acquainted with any instance where a favourable result has followed the operation when rendered necessary by uterine tumour. The presence of the growth both interferes with the due contraction of the womb, and thus exposes the patient to great risk of hæmorrhage; while even if this danger be surmounted, the hazard of inflammation of the uterus and peritoneum is one from which there seems to be no escape. Unfortunately the cases are but very few in which extirpation of the tumour is possible, for, in comparison with any operation by which the peritoneal cavity is laid open, that would seem to be far less hazardous. The successful removal of polypi during labour, and the extirpation of large fibrous tumours of the pelvic walls,* encourage to such a proceeding; but the only instance with which I am acquainted of the actual enucleation of a fibrous tumour from the uterus itself during labour, is related by M. Danyau.† His patient was thirty years old, had given birth to three children, after easy labours, and had reached the end of her fourth pregnancy, though slight hæmorrhage had been going on for three weeks. Forty hours after the escape of the liquor amnii, a foot of the child was felt presenting, while the pelvic cavity was almost completely filled by a tumour which seemed to be formed by the thickened posterior lip of the uterus, and which did not leave a space of above three quarters of an inch to an inch and a quarter between itself and the symphysis pubis. The child having been ascertained to be dead, and no question therefore arising as to the performance of the

* As in the remarkable case related by the late Professor Burns, of Glasgow, in his *Midwifery*, eighth edition, 8vo, London, 1832, p. 33.

† *Gaz. des Hôpitaux*, No. xlii. 1851; and Schmidt's *Jahrbücher*, vol. lxxi. August, 1851, p. 190.

Cæsarean section, M. Danyau, having consulted with Professor Dubois, carried a bistouri on two fingers of his left hand through the os uteri, which was open to the size of the top of a small wine glass, made a longitudinal incision through the anterior and upper part of the tumour, and then succeeded with two fingers of the right hand in shelling it out of the uterus and removing it from the pelvis. The tumour weighed twenty ounces seven drachms, its longest diameter was five inches and three quarters, its shape conical, with the apex downwards. The extraction of the child was easily accomplished after the removal of the tumour, and the patient recovered without any bad symptoms, though a considerable quantity of venous blood escaped at the commencement of the operation, when the tumour was first cut into.

In all cases, however, where it is practicable, operations on the parturient uterus are to be avoided, and the first thing to ascertain with reference to any tumour is whether it admits of being moved out of the pelvic cavity, since, if that can be done, it is obviously attended with the least possible hazard. In my own case it was readily accomplished; and there can be little doubt but that the same proceeding would have been successful in the case well described and delineated by Dr. Etlinger,* in which Professor Kilian of Bonn performed the Cæsarean section on a patient whose pelvis was occupied by a fibrous tumour that grew by a rather broad peduncle from the posterior surface of the womb. This person died forty-eight hours after the operation, from the effects of the hæmorrhage which attended it. My patient survived till the sixth day, and I cannot but attribute her death to an attempt which was made (injudiciously on my part) to puncture it before trying to carry it above the pelvic brim. There was no general peritonitis, but the wound in the tumour was gaping widely; the tissue about it was of a black colour, and discolouration extended thence inwards towards the centre of the tumour. The dark portion of the

* Etlinger, *Observationes Obstetriciæ*, 4to, Bonnæ, 1854, see pp. 50—53, and plates i. and ii.

tumour was softened, but the rest of it was of a vivid red colour, and neither it nor the other tumour, which was about the same size, namely, that of the head of a foetus at seven months, presented any trace of that general softening and disintegration which have been alleged to occur in these growths after delivery. The intestines in the left iliac fossa were matted together by recent lymph, and about four inches of them, just where they lay in contact with the punctured tumour, were much congested, quite rotten, and their posterior part was converted into a large greenish-black slough. This slough corresponded to a large slough on the outer and upper part of the punctured tumour. The other tumour was of a rose tint; the uterus, which presented some half-dozen small tumours about the size of peas, on its surface, was, in other respects, perfectly healthy. It seemed, in short, as if the puncture of the tumour had been the point of departure whence all the subsequent mischief proceeded.

In all cases, then, the endeavour to carry the tumour out of reach should precede any attempt at reducing its bulk by puncture. In the event, however, of the former failing, the apparent solidity of the growth must not be taken as warrant sufficient for dispensing with the trocar, for a cyst, if very tense, either from the accumulation of fluid within, or from any very great pressure upon it from without, will often yield, even to the well-practised finger, scarcely any sensation by which the nature of its contents can be suspected.

Lastly, I am disposed to think that in almost all of these cases it will be preferable to turn the child rather than to make any attempt at extracting it with the forceps; and even if the want of space be very great indeed, craniotomy, followed by turning (and little though it may be used in this country, I cannot refrain from adding the use of the *céphalotribe* to break up the base of the skull), will, I doubt not, enable us to carry to a safe conclusion a case which at first appeared to offer no alternative but the performance of the Cæsarean section.

At the close of the last Lecture, I stated my dissent from the opinion that there is a constant, or at least a general tendency

on the part of these tumours to pass into a state of softening or disintegration during pregnancy. I do not therefore conceive that the induction of premature labour, and still more of abortion, simply because a fibrous tumour is connected with the uterus, is either necessary or justifiable. The presence of a fibrous tumour so encroaching on the pelvic cavity as to render labour difficult or dangerous, is of course an indication for the operation ; so also may perhaps be the experience of a previous delivery which had been followed by symptoms of uterine inflammation. The mischief, however, dates, I believe, in all instances, not from any particular epoch of pregnancy, but from the expulsion of the ovum whenever that occurs, and the greater hazard attendant upon labours at the full period, is connected rather with the greater violence undergone by the uterus and the tumour during the passage of the foetus in advanced than in early pregnancy. Each case, then, must be considered and treated on its own merits; the mere fact of a pregnant woman having a fibrous tumour of her uterus cannot be taken as a sufficient indication for the induction of abortion or of premature labour.

It still remains for us to consider that variety of uterine fibrous tumour which grows from the inner surface of the womb, or which less frequently springing from either lip, hangs down by a stalk or pedicle into the cavity of the uterus, or into the canal of the vagina. The impropriety of the term *Polypus*, as applied to these solid growths, need not occupy us now; it is sufficient that it has been universally adopted, and is so well understood, that no one will be misled by the incorrect terminology.

In general structure these tumours are almost identical with those we have hitherto been studying; the only important difference perhaps being, that whereas the growth in all the former cases was distinct from the uterine tissue, even though imbedded in it, or projecting from it, some polypi are positive outgrowths of uterine tissue, their texture and that of the womb itself being inextricably interwoven.* Even in these instances, however, the

* As in a preparation in the Museum of St. Bartholomew's Hospital, sketched and referred to by Paget, *op. cit.*, vol. ii. p. 131, fig. 11.

substance of the growth is usually firmer, denser, and less vascular than that of the adjacent uterine wall ; while on the other hand, the pediculated fibrous tumour is generally, when growing from the interior of the womb, more succulent and better supplied with blood than similar tumours whose position and relations are different. The pedicle of these tumours is composed of uterine substance mingled with more or less dense cellular tissue, and though generally single, is sometimes formed by the coalescence of two or three bundles of fibres springing from different, though nearly adjacent, parts of the womb. A layer of uterine substance is continued from the pedicle for a varying distance along the tumour, sometimes investing it completely, at other times only in part, as the cup surrounds the acorn or the calyx the petals of a flower. Besides this, the polypus is always covered by the mucous membrane of the uterus, which becomes firmer and denser than natural, both it and also the muscular fibre of the womb itself undergoing development somewhat in proportion to that of the tumour. The tumour can often be shelled out of its coverings just in the same manner as an ordinary fibrous tumour may be enucleated from its investment of dense cellular tissue ; but this is not invariably the case, and the connexion between the substance of the polypus and the membrane that surrounds it is now and then very intimate. The vascular supply, as already stated, is more abundant than that of other fibrous tumours, though it may generally be observed that neither the arterial trunks entering the tumour nor the veins leaving it are proportionate in size to what might be anticipated from the quantity of blood in its substance. Some part of its supply of blood also comes to the polypus through the mucous membrane by which it is invested, though even in this no considerable vessels are in general perceptible. This comparatively small apparent supply of blood to these tumours, coupled with the fact that they always give rise to very profuse hæmorrhage, while such hæmorrhage is always arrested by a ligature applied round their pedicle, have contributed to form a problem in uterine pathology, which, till within a recent date, received very conflict-

ing and very unsatisfactory solutions. The profuse bleeding which is excited alike by non-pedicated fibrous tumours, and also by the very minute vascular polypi of the organ, seems to show that it is rather from the irritated mucous membrane of the uterus than from the surface of the tumour itself that the bleeding flows. The same fact, too, is further illustrated by facts such as the following. A woman, aged forty-six, was admitted under my care into St. Bartholomew's Hospital. She was a single woman, and, with the exception of a sense of weight at the lower part of the abdomen, since the cessation of her menses at the age of forty-three, had had good health till three weeks before she came under my notice. She was then suddenly attacked by profuse hæmorrhage, and at the same time a tumour had partially forced its way through her vulva. The loss of blood had continued more or less since, and the patient, at her admission, seemed very much exhausted by it. This tumour, which at its lower part was already in a state of superficial slough, was a fibrous tumour, which measured seven inches in length by four in diameter at its widest part, and weighed one pound one ounce and a-half. It was connected by a small and short pedicle with the posterior lip of the uterus; an arterial trunk about the size of one of the digital arteries seemed to be the source whence its supply of blood was derived; though it presented an unusual degree of vascularity, and its lower part, which had projected beyond the vulva, and had been subjected to pressure, was so intensely congested as to have an almost apoplectic appearance. Now this large and vascular growth had gone on, doubtless for years, increasing in size, and yet producing no symptoms, giving rise to no hæmorrhage, until, having partially escaped beyond the vulva, it began to drag upon the womb, to pull it downwards, and to irritate it, and then at once, from the womb itself, for there was no appearance of bleeding from any part of the surface of the tumour, sudden and most formidable hæmorrhage broke forth. The suspension of bleeding by the application of a ligature around the pedicle of a polypus, does not of necessity imply that the source whence the hæmor-

rhage proceeded is thus mechanically shut off, but is also applicable on the supposition that the ligature interrupts the vital relations between the tumour and the womb, and thus renders the polypus a far less powerful excitant of the uterine mucous membrane than it was before. No stronger proof can be afforded of the difference between a vital and a mere mechanical stimulant of the uterus than is given by the comparative impunity with which, in many instances, the metallic stem of the uterine supporter is borne within the cavity of the womb, as contrasted with the almost irrestrainable hæmorrhages which are often excited by even the smallest vascular polypi.

Fibrous polypi are susceptible of the same kinds of changes as may take place in fibrous tumours elsewhere situated. I am not aware, however, of their undergoing that atrophy which occasionally occurs in other fibrous tumours of the uterus, while calcareous deposits in their substance are excessively rare. On the other hand, both œdema of their substance, and the extravasation of blood into their tissue, are far from being of unusual occurrence ; and when they have passed through the os uteri into the vagina, the membrane covering their lower surface not infrequently becomes ulcerated, or passes even into a sloughing condition, which may extend to the adjacent substance of the growth. They do not, however, so far as I know, ever shell out completely from their investments as some other fibrous tumours now and then do, and when spontaneously detached and expelled, their natural cure is brought about by their pedicle giving way.

Formed, as these polypi usually are, within the cavity of the uterus, their influence upon that organ seems to depend somewhat on the situation whence they spring. Thus if it arise low down in the cervical canal, the tumour soon grows beyond these limits, and hanging down into the vagina, may acquire a considerable size without exerting much influence on the womb itself, neither disturbing its functions nor producing any considerable hypertrophy of its tissue. On the other hand, those polypi which are developed from some point high up in the

womb, naturally remain within its cavity till they have acquired a considerable size, and thus give rise to enlargement of the organ, and to thickening of its walls. There seem, however, to be considerable diversities between the relations which the polypus continues to bear in different cases to the organ within which it is developed. In the great majority of instances, before it has acquired the size of a small apple, the os uteri, against which the lower part of the polypus lies, gradually dilates to allow its passage, and the growth is then found hanging down into the vagina, its pedicle embraced, though but seldom tightly constricted, by the orifice of the womb. Sometimes, however, I know not why, this process is effected much less quickly; the margins of the os uteri do not yield so as to allow of the easy exit of the polypus, but violent uterine action is set up, and under efforts like those of labour, and which recur in paroxysms, and then subside, and again recur after the lapse, perhaps, of many days, the polypus is literally born. It is usually under these violent throes that the womb, as was explained in a former Lecture,* sometimes becomes literally inverted, or turned inside out; an accident which is brought about less by the mere mechanical action of the weight of the tumour than by the efforts which it excites in the muscular tissue of the womb.

When once in the vagina, the growth of the polypus still goes on, and probably even more rapidly than before, since it is no longer subjected to the same degree of pressure as while it was within the uterus. For the most part, however, the symptoms to which it has given rise have been so serious as to lead to its early detection, and it is removed before it has acquired any formidable dimensions.† If it be allowed to sojourn for some time in the vagina, that part of the tumour to which the access seldom fails to become ulcerated, while it is fu

* See Lecture XIII. on Inversion of the Uterus, p. 246.

† I have already mentioned one case where the polypus was removed. An instance is related by Heyfelder, *Studien im Gebiete der Gynäkologie*, Stuttgart, 1838, vol. i. p. 269, of a polypus which was removed. Numerous references are given by Meissner, *op. cit.*, - polypi of enormous dimensions.

means unusual for the adjacent surface of vagina to become likewise inflamed and ulcerated, and for adhesion then to take place between the two. A similar occurrence happens occasionally, though much less often, between the tumour and the lining membrane of the uterus itself; and either of these accidents may make the diagnosis obscure, and must render all forms of operative interference unusually difficult.

The two grand *symptoms* of polypus uteri are hæmorrhage and leucorrhœa, symptoms which go on increasing in severity and continuance until, if their cause were undiscovered or unremoved, they would at length exhaust and destroy the patient. At first the seasons of menstruation are those when the hæmorrhage takes place, the periods lasting longer, returning sooner, and being accompanied with a more profuse loss than was their wont, while abundant leucorrhœa persists in their intervals. Then the periodicity of the hæmorrhage ceases, for its presence becomes general, or constant, and it is at length found impossible to keep any account of when menstruation last took place, or when it may next be expected.

A constant sense of bearing down may be experienced, or some mechanical inconvenience or other, from the pressure of the polypus, if large, upon adjacent parts; or expulsive efforts may sometimes occur; but they are by no means constant; and the last mentioned symptom in particular is met with only in a small minority of cases. It has been said that the escape of coagula of an annular shape, due to their being formed around the pedicle of the polypus, is characteristic of this affection. It is, however, one of those plausibilities which savour more of the study than of the bed-side, and experience does not confirm the statement. The only rule, indeed, which I can give you as to the diagnosis of polypi, is, that whenever hæmorrhage having been profuse at one menstrual period recurs equally profuse at the succeeding one, you should on no account neglect a vaginal examination. The tumour projecting from the vagina is encircled by its lips, and passing up into its interior, you may reach the point to which your finger can reach,

can scarcely be mistaken for anything else, except perhaps for the inverted uterus, the distinctive characters of which I have already endeavoured to point out.* Neither, indeed, can the nature of those polypoid growths which proceed from one or other lip of the uterus be doubtful, since the os uteri will be perceptible either in front of the growth or behind it.

In cases where the polypus has not yet passed through the os uteri, the *diagnosis* may be very difficult, for hæmorrhage and leucorrhœal discharge are common to many uterine ailments, while the growth itself may not be sufficiently large to produce any marked increase in the size of the womb, still less to expand its lower segment. In doubtful cases the uterine sound is often of much service, since as, by means of it, we ascertain either that the uterine cavity exceeds its natural dimensions, or is limited to them, so the presumption in favour of the presence of some tumour in the womb is either greatly strengthened or altogether refuted. Sometimes, however, the introduction of the sound is very difficult, or, from its extremity impinging on the body of the tumour, is altogether impossible; while even at the best, though the sound may raise our presumption of the existence of a polypus almost to a certainty, we are not thereby at all assisted towards its removal. The ingenuity of Professor Simpson,† however, has furnished us, in the sponge tent, with a means by which we can readily dilate the os uteri sufficiently to make a careful examination of the interior of the womb, and to perform any operation which the tumour may call for, almost as easily as if it had already descended into the vagina.

This brings me, in conclusion, to consider the best means of removing these fibrous polypi of the uterus, for I will not waste your time in repeating again all the measures by which you must try for the moment to stanch the profuse hæmorrhage to which these growths sometimes give rise. Now there are two different proceedings, each of which has been strenuously

* See p. 243.

† *On the Detection, &c., of Intra-uterine Polypi*, in *Ed. Monthly Journal*, Jan., 1850, and *Obstetric Memoirs*, vol. i. p. 122.

advocated by some persons, and equally strongly reprobated by others. One of these consists in strangulating the growth by means of a ligature, the other in its excision with the scissors or some other cutting instrument. The apprehension of dangerous bleeding from the removal of polypi, to which mistaken anatomical views in a measure contributed, led to the adoption of the ligature in the first instance, and a general conviction of its greater safety, still retains it in use among a large number of practitioners. On the other hand, it is objected against the ligature that its application is almost always tedious, often difficult; that while in the case of the smaller polypi and of those with thin pedicles, its employment is superfluous, its action when the pedicle is thick is both slow and uncertain, and it of necessity condemns the patient for days to all the discomforts arising from the decay of the strangulated tumour. But further, the operation is attended not merely by discomfort, but also by positive danger, partly from the tissue of the uterus itself being almost unavoidably included in the ligature, partly from the risk of phlebitis being set up by the absorption of the putrid debris of the decaying polypus. That these dangers, too, are far from being imaginary, you may satisfy yourselves by visiting any of the anatomical museums of this metropolis, all of which I think you will find contain specimens of polypi partially detached, or of uteri from which the growth had been quite separated by ligature; but in which the supervention of inflammation had destroyed the patient. There is nothing, however, that places the dangers of this operation in so strong a light as the fact that out of twenty cases of removal of fibrous polypi by ligature, recorded by a most strenuous defender of that operation, Dr. R. Lee,* nine, or more than one in three, had a fatal result; a mortality more than double that of the operation of lithotomy, as high as that which occurs in placenta prævia, and higher than the mortality from malignant cholera.

* *On Ovarian and Uterine Diseases*, fcap 8vo, London, 1853, Report iii. pp. 173—227. The fatal cases are Nos. 8, 16, 21, 25, 30, 38, 41, 43, 47, and the successful, Nos. 14, 15, 17, 18, 20, 23, 24, 27, 28, 32, 40, 42, 44, 46, 48, 49, 50.

The reason alleged for the preference of the ligature to the excision of polypi is the risk of hæmorrhage attending the latter operation. My own experience of eight cases of excision of fibrous polypi unattended either by hæmorrhage or by any other untoward symptom, is too small to be of much weight; but Velpeau* states that no instance of troublesome hæmorrhage occurred to him in twenty cases in which he excised polypi; Lisfranc† states that he met with but two out of 165 cases; and Dupuytren‡ also but two out of nearly 200; while they all refer to instances of phlebitis, or of peritoneal inflammation leading to a fatal issue after the operation by ligature. There are, indeed, a few cases on record of inflammatory symptoms succeeding to the excision of polypi, just as there are a few in which dangerous hæmorrhage has followed their removal by ligature; but I believe that on the whole the advantages of the former operation greatly preponderate; that it is much easier, much more speedy, and much safer; and I can scarcely conceive of any case in which it will not be found the better proceeding.

Considering the opinion which I entertain concerning the comparative merits of the operation by ligature and that by excision, it can scarcely be expected that I should enter into any lengthened details with reference to the former mode of extirpating polypi, or the different instruments which have been invented for the purpose. It may suffice to say that on the whole Gooch's double canula, with the contrivance invented by Laundry, the instrument-maker in the Borough, for tightening the ligature, appears to me the most easy of application, and most generally suitable; though nothing can better illustrate the great difficulty often experienced in tying polypi than the number of the instruments which have been devised with this end.§

* *Médecine Opératoire*, t. iv. 2nd ed. p. 391.

† *Clinique Chirurgicale de la Pitié*, t. iii. p. 210.

‡ Schmidt, *Jahrb.* vol. ii. p. 90.

§ An elaborate critique of the different instruments for tying polypi is given by Kilian, *Operationslehre f. Geburtshülfer*, 2nd ed. Bonn, 1852, part ii. pp. 208—248. Dr. Gooch himself describes his own canula and its mode of application at pp. 259—265 of his work on the *Diseases of Women*, so clearly, that no better rules can be laid down for the use of the ligature.

The excision of polypi is very seldom indeed attended by much difficulty, or even by so much pain as to necessitate the use of chloroform, though, if the patient be nervous, there can be no possible objection to its employment. The patient being placed on her back, with the feet resting on a stool, and the knees separated and firmly held apart by assistants, a pair of Museux hooks are to be carefully carried along the index finger of the left hand of the operator as high as the pedicle of the tumour. They must then be carefully separated; two fingers of the left hand guarding their hooked extremities until they are sufficiently far apart to allow of the pedicle being seized by them firmly. If the polypus be but small, a single pair of hooks will suffice to hold it securely, and the polypus may now be steadily but gently drawn down beyond the external parts, or at any rate close to the vulva, when its stalk may be divided by a pair of stout, curved, probe-pointed scissors, similar to those which surgeons use in operations on the tongue. If, however, the first pair of hooks be not fixed very firmly, or if the tumour be of considerable size, so as not to yield to traction readily, it may be expedient to introduce a second or even a third pair of hooks before making any extractive efforts. In this case it is often convenient to introduce each hook and fix it separately, which is easily enough done, by having the instrument made as my former colleague, Mr. Arnott, was accustomed, with the two halves separate, but capable of being united by a lock like that of the common midwifery forceps. Even when thus contrived, however, if the polypus be large, so as nearly to fill the vagina, a sharp hook cannot be carried high up so as to lay hold of its pedicle without a good deal of risk of getting entangled as it is passed, or of pricking the operator's fingers severely. A metal sheath which I have had made for covering these hooks, and which can be immediately dislodged, as soon as they have been carried to the part of the tumour into which it is wished to fix them, very readily overcomes this difficulty. Steady traction seldom fails to bring the growth within reach of the scissors, though I have known it to be requisite to employ the midwifery

forceps to bring a large polypus through the vulva. Lisfranc was accustomed, in cases where there was much difficulty in dragging down the polypus, to fix the hooks into the lips of the uterus, and then to make traction directly on the womb itself. Neither this proceeding, however, nor that of incising the perineum, in cases where the large polypus could not pass the narrow vulva, and which has the authority of Dupuytren in support, seems to me expedient.

The division of a large polypus, and its extraction piecemeal, has been proved by experience to be unattended by any of those risks of hæmorrhage which were once apprehended from the employment of cutting instruments in any way for the extirpation of these tumours; while various practitioners have invented curved knives or cutting hooks for the division of the pedicle of polypi which could not be drawn down with facility. Thus M. Velpeau* employs a knife eight or ten inches in length, curved at its point, which is blunt, and has a cutting edge only on one side. With this instrument he divides the pedicle of the polypus, which is kept on the stretch by an assistant grasping it with a pair of Museux hooks. A very ingenious, though perhaps rather complicated knife, the blade of which is fixed at right angles with the handle, and is introduced defended by a sort of sheath, like that of a *bistourie cachée*, was invented and used in a case where the polypus was very large, and its pedicle very thick and solid, by Dr. Herrich, of Ratisbon,† while more lately Professor Simpson, of Edinburgh,‡ has employed an instrument not unlike the sharp hook employed by midwifery practitioners for decapitating the foetus. The instrument seems in his hands to have answered very well, though one might have feared that the sharp edge being on the same plane with the handle of the instrument, it would have cut too obliquely for the ready division of the pedicle.

By whatever means a polypus is separated from the uterus

* *Bull. Gén. de Thérapeutique*, vol. xiv., Paris, 1838, p. 156, and Meissner, *op. cit.*, vol. i. p. 864.

† *Ueber Gebärmutter Polypen und deren Ausrottung*, 8vo, Regensburg, 1846.

‡ *Ed. Monthly Journal*, Jan. 1855, and *Obstetric Works*, vol. i. p. 150.

(polypi of a malignant character of course excepted), the pedicle withers, and the growth is not reproduced. This fact, which was once regarded as suggesting a problem of difficult solution, is not hard to understand, if we bear in mind that the pedicle is formed of uterine tissue. On the removal of the growth, the stimulus to hypertrophy of the uterus is withdrawn, the whole organ returns by that process of involution of which we see so many illustrations to its natural dimensions, while the pedicle of the polypus, having no longer any office to perform, is completely removed.

Other modes of getting rid of fibrous polypi have been occasionally resorted to, but it is scarcely necessary to do more than enumerate them. Torsion is but rarely applicable, for the pedicle is usually too thick and too firm to admit of the growth being thus removed. If the polypus be small, and its stem slender, there can, however, be no objection to it, while it unquestionably has the great advantage of doing away almost completely with all risk of bleeding. The forcible tearing away or avulsion of the growth has nothing whatever to recommend it; it is uncertain, painful, and hazardous. The destroying the vitality of the polypus by forcible compression, either of the whole mass, or by an instrument strangulating its pedicle, as practised by M. Gensoul, of Lyons,* appears open to all the objections that may be alleged against the ligature, without any compensating advantage.

Some reference ought, perhaps, to be made to the occasional complication of pregnancy or labour with polypus of the uterus, before we take a final leave of this subject.† There seems to be good reason for believing that polypi participate in the general development of the uterus during pregnancy, and that a growth previously very small may attain to a very considerable size during gestation. They do not, however, in general produce marked symptoms during pregnancy, nor do they tend to interfere with its natural progress. After the commencement of

* *Nouveau Procédé pour opérer les Polypes de Matrice*, 8vo, Lyons, 1851, p. 11.

† A very able essay on the subject, which will very well repay perusal, was published by Dr. Oldham in the *Guy's Hospital Reports*, 2nd series, vol. ii.

labour, their injurious effects become manifest, since they sometimes present a mechanical obstacle to the passage of the child, and at other times give rise to untoward consequences after its expulsion. Of these, one of the most frequent is hæmorrhage; the polypus within the uterine cavity interfering with the due contraction of the organ, just as the portion of adherent placenta does in cases of its disruption. The other risk is that of violent and uncontrollable uterine action being excited, and exhausting the patient by its severity and continuance, as, for instance, in the remarkable case related by Dr. Gooch,* in which, after delivery, a polypus weighing three pounds fifteen ounces was expelled beyond the external parts, and the patient died while her medical attendants were still uncertain as to what her ailment was, and what should be done for her cure.

In spite of these contingencies, however, the general rule, and one concerning the wisdom of which there can be no doubt, is not to meddle with an uterine polypus either in labour or after delivery, unless the symptoms are so serious as to leave us no alternative. The ground for this rule is furnished by the risk of hæmorrhage if the polypus be excised, and of phlebitis from the absorption of decaying animal matter if the growth be removed by ligature; while the vascularity of the polypus, and probably its size, will rapidly diminish as the involution of the uterus goes on, and the whole organ becomes less and less susceptible as the date of delivery becomes more distant.

It is, therefore, better during labour to extract the child, and afterwards to check hæmorrhage, and by opiates to still any violent uterine efforts, if possible, rather than by attempting the immediate removal of the polypus, to expose the patient to hazards so serious and so difficult to obviate. If, however, interference became urgently necessary, I think that I should, even in these cases, prefer the excision of the polypus, with the present risk of hæmorrhage, to the somewhat tardier, but, I apprehend, graver dangers attendant on the use of the ligature.

And here I should close both this subject and the present

* *On Diseases of Women*, &c, p. 281, case vii.

Lecture, which has already reached beyond customary limits, but that there are two forms of uterine disease concerning which a word or two ought to be said before we pass to those cancerous diseases of the womb, which constitute the most painfully important of all the ailments of the female sexual system. The two affections to which I will now briefly refer, are *Fatty Tumours of the Uterus*, and *Tubercular Degeneration of its Lining Membrane*; and both are of greater interest to the morbid anatomist than to the practical physician.

I have seen no specimen of fatty uterine tumour, and am acquainted with but two instances of its occurrence. The patients in whom it was observed were of the respective ages of fifty and fifty-three;* the former of whom, after suffering for eleven years from leucorrhœa, expelled from the vagina a tumour the size of the fist, which was ascertained to be made up of fat, closely resembling cholestarine, though not quite identical with it. In the other case the tumour, which was of the size of a child's head, projected beyond the external parts, but was connected by a pedicle three fingers broad with the whole margin of the os uteri. It was removed by ligature, and the patient, who had suffered from menorrhagia for a year previously, recovered. The tumour, which weighed three pounds and a half, is said to have been an ordinary fatty tumour, having an investment of dense cellular tissue, septa of which dipped down into its substance. The patient in the first case continued after the expulsion of the tumour liable to periodical discharges of very offensive slimy, watery fluid, in which were now and then small flat masses similar to the larger substance. The state of the cervix was quite natural, and I suppose that in this case the deposit of fat had taken place upon the free surface of the diseased mucous membrane of the womb, and had by degrees accumulated in the cavity of the organ until it stimulated its muscular fibres to contract upon and expel it.

* The cases are related by Dr. W. Busch, in *Müller's Archiv*, 1851, p. 358, and Dr. Seeger in *Würtemb. Zeitschr.* vol. v. 1852, and *Schmidt's Jahrb.*, Dec. 1852, p. 335.

In strict propriety, *tubercular deposit* in the uterus ought not, perhaps, to be noticed here, but should be referred to a separate category ; but convenience may be allowed to overrule strictly scientific arrangement. It happens occasionally that on examining the uterus, although its exterior may appear quite healthy, and the canal of the cervix also be free from disease, the whole of its cavity is found occupied by a matter of a dirty yellow colour, closely resembling both in its aspect and its consistence the substance of a tubercular bronchial gland when just beginning to soften. This deposit is generally about an eighth of an inch in thickness, is easily scraped away with the back of the scalpel, but on its removal it is found that all trace of the lining of the uterus has disappeared too, or if anywhere a portion of it remains, that is seen to be opaque, more vascular than natural, and to present beneath it small yellow spots, looking like distinct tubercular deposits, which, in fact, they have been ascertained to be by careful microscopic examination. In cases where the disease is only beginning, the separate yellow deposits in the mucous membrane are alone apparent, while when the disease is far advanced (and it was so in the two instances which came under my own observation) not only is the mucous membrane completely destroyed, but the deposit encroaches on the substance of the womb, its cavity is enlarged by the abundance of the morbid substance, and its walls are thickened ; changes that in some instances have been known to occur to a very considerable extent.

In the great majority of cases the tubercular deposit does not extend beyond the cavity of the uterus, though sometimes a similar matter is found distending the Fallopian tubes, and tubercular degeneration of the ovaries sometimes coexists with the disease of the interior of the womb. Either of these occurrences is, however, more frequent than the extension of the disease to the cervical canal, and Rokitansky* denies that it ever appears there as a primary deposit. Now and then one sees in the living subject, on the surface of one or both lips of

* *Pathol. Anatomie*, vol. iii. p. 550.

the uterus, deposits of a yellow colour, of the size of a split pea, or smaller, having altogether the appearance of small deposits of yellow tubercle, and which on being pricked give issue to a small quantity of matter of the consistence of pus, or rather firmer, and having a granular appearance under the microscope. These deposits have been alleged to be tuberculous; and the high authority of the late Professor Kiwisch* may be adduced in support of that opinion. I am familiar with the appearance, but am not altogether convinced of its tuberculous character; and am rather inclined to consider it as due to hypertrophy of some of the Nabothian follicles, with obliteration of their orifices and alteration of their contents. At any rate, though small slightly excavated ulcers are now and then left behind, I have never been able to trace any connexion between this appearance and any form of destructive ulceration of the cervix.

The disease seems to be always secondary to tubercular deposit elsewhere, and even then to be of rare occurrence, though perhaps less so than it was believed to be by Louis,† who did not estimate its frequency higher than one and a-half per cent. of all cases of tubercle in general. M. Kiwisch‡ states, that at Prague it was met with once in every forty cases, or, in other words, with a frequency of two and a-half per cent.: and I know of no other statistics bearing on the subject.

The following table deduced from data furnished by Kiwisch and a recent very pains-taking writer on the subject, Dr. Geil,§ furnishes some information not without its value.

Tubercular deposit in the uterus was met with—

In 6 subjects between 10 and 20 years				
22	"	"	20 — 30	"
15	"	"	30 — 40	"
10	"	"	40 — 50	"
7	"	"	50 — 60	"
6	"	"	60 — 70	"
2	"	"	70 — 80	"

Total 68

* *Op. cit.*, vol. i. p. 558.

† *Récherches sur la Phthisie*, 2nd ed. Paris, 1834, p. 142. ‡ *Op. cit.*, p. 559.

§ In an inaugural dissertation, published at Erlangen in 1851, and of which an abstract is given in Schmidt's *Jahrbücher*, March, 1852, p. 324.

In forty-five of the cases collected by Dr. Geil, the seat of the affection is distinguished—

Uterus alone affected	. . . . .	1 case
„ and tubes	{ with affection of peritoneum . 19 cases	
	{ without „ „ . 12 „	
Uterus, tubes, and	{ in form of an aphthous process . 2 cases	
vagina . .	{ „ true tuberculous ulcers 1 case	
Tubes alone affected	. . . . .	8 cases
Right tube alone	. . . . .	2 „
		—
		Total 45

Amenorrhœa or dysmenorrhœa, often associated with leucorrhœal discharges, are the *symptoms* which are ordinarily observed in connexion with uterine tuberculosis. In them there is nothing pathognomonic of this special form of uterine disease, nor do they call for any particular mode of treatment. Indeed, if we bear in mind that tuberculous affections of the womb appear to be always secondary to extensive deposit of tubercle in other organs, we are led to the practical inference that, in cases where phthisical symptoms are present, there is every reason for interfering as little as possible for the removal of amenorrhœa, or other irregularities of the menstrual function, and especially for abstaining from much local treatment of any other uterine ailment that may occur.

LECTURE XVIII.

MALIGNANT OR CANCEROUS DISEASES OF THE UTERUS.

Hopelessness of the subject, but importance of questions involved in its study ; erroneous opinions formerly held concerning it.

Definition of CANCER ; its varieties. Scirrhus extremely rare ; its anatomical characters.

Medullary Cancer ; its nature, mode of occurrence of ulceration, its rapid progress ; abortive attempts at cure, and advance of the disease. Hypertrophy of uterus in its course ; changes in its walls ; its interior ; on its surface. Extension of disease to vagina and bladder. Exceptional cases ; cancer of body of uterus ; cancerous polypi. Alveolar cancer.

Epithelial Cancer ; its general characters, its relation to medullary cancer ; essential identity with Cauliflower Excrescence.

Ulcers of the os uteri ; the so-called Tuberculous Ulcer ; Corroding Ulcer.

Frequency of secondary affections in cases of uterine cancer.

IN the study of the diseases which have hitherto engaged our attention, we have never entirely lost a sense of hopefulness. Either medicine might cure the ailment, or surgery might remove it ; or at the very worst, so much might be done to retard its progress, and to alleviate the sufferings which it occasioned, that life was in many instances but little, if at all shortened ; was sometimes even scarcely embittered by its presence.

In passing now, however, to the investigation of the malignant diseases of the womb, of *cancer* and its allied disorders, we shall find but few of those mitigating circumstances which lessen the darkness of the picture in the case of many other incurable affections. Pain, often exceeding in intensity all that can be imagined as most intolerable, attended by accidents which render the sufferer most loathsome to herself and to those whom strong affection still gathers round her bed ; the general health broken down by the action of the same poison as produces the local suffering, and all tending surely, swiftly, to a fatal issue, which

skill cannot avert, from which it can scarcely take away its bitterest anguish : such are the features in the picture which I must now call on you to contemplate, and that not hurriedly, nor for a moment, but most carefully, and deliberately, and in all its various aspects.

There are indeed many reasons which prevent our passing over the subject of uterine cancer (as we might be glad to do) with but a passing notice. The frequency of the disease forbids it, for scarcely any age is free from its attack, while it is doubtful whether any other form of organic affection of the womb is met with so often, and it is certain that there is no other so fatal. The dread most naturally felt, lest this symptom or that symptom should portend the onset or imply the existence of cancer, forbids it ; for we are called on over and over again to remove the apprehensions of women whose fears have been excited by some uterine ailment, perhaps of no great moment, but out of which they have shaped to their affrighted fancies all the hideous features of an incurable, an almost unbearable disease. Need I say, then, how much it imports that we should be able to remove such apprehensions when causeless, not by holding out vague hopes or uncertain expectations, but by positive assurances founded on large and accurate experience, and as far as may be on certain knowledge ?

To those practitioners and writers, both English and foreign, who have taken the most active part in the study of the inflammatory affections of the neck of the womb, and whose investigations have led them (as some believe, and I confess myself to be of that number,) to an exaggerated estimate both of their frequency and of their importance, we yet owe a debt of gratitude for the light which they have thrown on this disease, which outweighs many overstatements and cancels many errors. Cancer of the uterus used before their time to be described as a disease slow in progress, continuing in its first quiescent stage of scirrhus not only for months, but for years, and then, excited by one knows not what cause to activity, passing into the state of ulcerated carcinoma, and thus at its close quickly destroying the

patient. It sufficed, then, for the neck of the womb to be hard and painful, and somewhat enlarged, for the suspicion of malignant disease to be entertained, and for years of causeless anxiety to be entailed upon the patient. Such and such-like were the results which followed from confounding the consequences of inflammation and of kindred processes, with the changes which the deposit of the elements of cancer brings about in the affected part.

It is scarcely necessary to *define cancer*, but if some definition must be adopted, I know of none better than Muller's:* "Those growths may be termed cancerous which destroy the natural structure of all tissues, which are constitutional from their very commencement, or become so in the natural process of their development, and which, when once they have infected the constitution, if extirpated, invariably return, and conduct the person who is affected by them to inevitable destruction." Taking this definition, however, as, on the whole, the best that can be given, we must still bear in mind that morbid anatomy and chemical research have both, within the sixteen years that have passed since it was framed, tended to show great diversities between the different forms of carcinoma, and to show also that many of those which affect the womb are local in their origin, and continue so through much of their progress; and that probably if we could always discover the existence of the disease early, we often need not despair of its cure.

No form of carcinoma seems to be peculiar to the uterus, though they do not all occur with anything like the same frequency. Fungoid or medullary carcinoma is by far the most common; next in frequency may be classed the epithelial varieties of the disease, if indeed it be not more correct, as some men of high authority believe, to refer them to a separate category distinct from genuine cancer. Next to them, but divided by an interval which widens in exact proportion as fresh evidence is brought to bear on the subject, may be classed scirrhus, or hard cancer; while almost as rare, or, perhaps even

* *On Cancer*, &c., English Translation, 8vo, London, 1840, p. 28.

more uncommon, stands the colloid, or alveolar variety of the disease.

The only attempt with which I am acquainted at a numerical estimate of the comparative frequency of *scirrhus*, or *hard cancer*, and other varieties of malignant disease of the womb, is the statement by the late Professor Kiwisch,* that about three of every ten cases of cancer of the womb are scirrhus. This estimate, however, in all probability much overrates the frequency of scirrhus; and I cannot but think that many instances of firm medullary cancer have been regarded as scirrhus, and this not only by less competent observers, but even by Kiwisch himself. He goes on to say, "that with the commencement of the softening of fibrous carcinoma, the peculiar characters of the growth progressively disappear; it grows like medullary cancer, becomes more vascular, and is easily broken down; contains a pultaceous, brain-like substance, and the ulcer which forms upon it presents precisely the same external appearance and the same characters as those which result from the breaking down of medullary cancer."

The great authority of Rokitansky† may further be adduced in support of the opinion that "fibrous cancer is of extreme rarity;" while, on the other hand, "medullary carcinoma occurs with the greatest frequency." To say after this that I have not met with any example of genuine scirrhus of the uterus, considering how few comparatively are my opportunities for observation after death, may seem almost an idle impertinence. It is more to the purpose, however, to add that my friend Mr. Paget informs me that he has not met with any instance of it, while any one who carefully examines the preparations in our anatomical museums will find that this disease, once said to be so common, is in reality but seldom met with. It is perhaps not irrelevant to mention, that of a hundred and twenty cases of uterine cancer of which I have a record, the disease appeared from an examination during the patient's life to be of the

* *Op. cit.* vol. i. p. 518.

† *Pathologische Anatomie*, vol. iii. p. 550.

medullary kind in a hundred and eight, epithelial in ten, and colloid in two, while in not a single instance did I recognise the characters of scirrhus, though I have seen some cases of alleged scirrhus in which the history of the patient, and the result of long-continued observation, plainly showed the name to have been misapplied, and the enlargement and induration to be due to causes of a perfectly innocent kind.

Before describing from my own somewhat scanty materials, the anatomy of uterine cancer, I will quote Rokitansky's description of the scirrhus variety of the disease, deduced, as he informs us, from a very few observations. He says :*—"On a careful examination, one may discover in the midst of the tissue of the portio vaginalis, another structure recognisable by the different shade of white of the fibres composing it, and which, though closely packed, intersect each other in every imaginable direction ; while the small interstices between them are filled by a transparent matter of a pale, yellowish-red, or greyish colour. This new structure is infiltrated into the uterine substance without any distinct limits ; extending further in one part than in another, and here and there heaped up in greater quantity, thus producing the enlargement of the portio vaginalis, the uneven nodulated character, and the well-known induration of its substance."

In spite of differences on other points, all observers are agreed that the neck of the womb, or rather that part of it which projects into the vagina, the portio vaginalis, is the point at which cancer generally commences, and to which for a season it is confined. Its mode of commencement differs, according as the disease belongs to the epithelial or to the *medullary* form. In the first case, the papillæ of the os uteri seem to be the point of departure of the evil, and a large, granular, sprouting outgrowth not infrequently projects into the vagina, while still the subjacent tissue is but little involved. In the second case, the morbid deposit takes place in the substance of the part, enlarging, but thickening far more than lengthening it, increasing the size of

* *Loc. cit.*, p. 550.

the lips of the uterus, rendering them hard and tense, though still not without a certain elasticity, and at the same time irregular and nodulated; while as they enlarge they usually gape, and leave the mouth of the womb and the lower part of its cervical canal more widely open than in a state of health.

On making an incision into the parts which have thus lost their ordinary characters, the place of the natural structure of the uterus is found to be more or less occupied by a white, firm, semi-transparent deposit, which in some parts seems infiltrated into the proper tissue of the womb, in others, has entirely taken its place. This deposit is always more abundant near the mucous surface of the organ than towards its outer wall; and a thin layer of muscular substance may often be detected beneath the peritoneal investment of the uterus, even when the conversion of its tissues into cancerous structure has been most complete.

It is very seldom that after death one finds nothing more than this substitution of cancerous deposit for the proper tissue of the womb. In the great majority of cases softening takes place, even while the part involved is but a comparatively small portion of the womb; softening is soon followed by death of the mucous membrane of the os uteri; an ulcer forms, a ragged uneven sore, with raised, irregular, hardened edges; and a dirty putrilage covering its uneven surface, takes the place of the smooth but enlarged lips of the organ. Or, if the disease go on still further, the lips of the womb and its cervix are altogether destroyed, and a soft, dirty white flocculent substance covers the uneven, granular, and hardened surface, which alone marks their former situation.

These ulcerations, when once formed, increase with great rapidity, a fact of which I have more than once seen remarkable illustrations. A patient, aged forty-nine years, was admitted under my care into St. Bartholomew's Hospital, whose symptoms consisted of hæmorrhage, at first profuse, afterwards occurring frequently and without cause, though in less abundance, and with it some pain in the back had of late been associated. The uterus was low down, quite moveable in the pelvis, and not much

enlarged. The posterior lip was thin and seemed healthy, the anterior was thick, hard, and nodulated, though the mucous membrane covering the surface of both appeared healthy under the speculum. Twelve days afterwards the examination was repeated, and the advance of disease within this short time was very remarkable. The posterior lip was now no longer thin and natural, but thickened, puckered, and uneven, and the inner surface of the anterior lip was irregular as if from ulceration, while the introduction of the speculum showed the surface to be uneven, ragged, black, and bleeding.

I have seen other similar cases, but none in which the occurrence of ulceration was so sudden, or its subsequent progress so rapid as in this instance. It is not easy to account for the occurrence of ulceration in all instances. Commonly it is preceded by softening of the morbid deposit, but this is by no means constant, for in the very instance which I have related, and in others, too, in which it has been possible to fix the date of the ulceration, and to trace its subsequent progress, the cancerous substance round the ulcer has been, and has still continued firm. Mere rapidity of growth, too, does not of itself produce ulceration, for some instances of rapidly growing medullary cancer of the womb excite our suspicion; and yet obscure our diagnosis by the absence of ulceration even up to a late period. All that we can venture to assert with reference to the subject is, that in all forms of cancer of the womb (with the exception, perhaps, of that of its body), ulceration and the formation of an open sore take place sooner or later; and further, that this ulceration may occur in either of two ways,* either proceeding from within outwards, in which case it is preceded by softening of the cancerous tissues, or from without inwards; the vitality of the investing membrane of the uterine lips being destroyed first, just in the same way as the vitality of the skin is sometimes destroyed over a cancerous tumour of the breast.

A few days often suffice to give to the ulceration the dimensions and even the depth which it may be found to retain for

* See, with reference to this subject, Paget, *op. cit.*, vol. ii. p. 334.

months subsequently. The patient, indeed, grows worse, the discharges continue, composed of pus from the ulcerated surface, foetid from the admixture with it of dead and decaying materials, tinged with blood from the giving way of some of the vessels distributed to the granulations, while every now and then abundant hæmorrhages break forth, profuse enough, perhaps, to excite apprehensions even for the patient's present safety. If we examine, we find sprouting granulations or a positive fungous outgrowth from the surface, and, then, after a time, the fungus disappears, the surface feels less uneven, the edges less unhealthy, and we can almost persuade ourselves that here and there a process of cicatrization has begun. And yet healing does not take place. "The cancer sore does not heal, because its base, the cancer substance, is not cicatrix tissue, and consequently can form no scar, and the apparent scars which now and then form are never lasting. It does not heal, because the outgrowth is constantly going on ; it does not heal because no skinning takes place upon its surface ; and, lastly, it does not heal because the new-formed tissue speedily dies again."* New formation and death of the newly formed tissues go on in constant succession ; a series of abortive attempts at cure, such as prevent the rapid extension of the ulcer, such as cheer the patient with delusive hopes of recovery, such as sometimes mislead the unwary, even among members of our own profession ; and such as, I blush to say it, furnish the wretched charlatan with a fair pretext for the most despicable of all falsehoods ; for those with which, for his own behoof, the doctor dares to impose on the credulity of his patients.

Slowly, however, though the disease may sometimes seem to advance, it yet does advance, cancerous deposits extending from the cervix into the substance of the body of the uterus ; the new-formed tissues dying, and dying on the whole to a greater extent than they are reproduced, until at length the lips of the os are quite destroyed, the portio vaginalis of the cervix is destroyed too, and a widely gaping opening, with thick, hard,

* Bruch, *Ueber die Diagnose der bösartigen Geschwülste*, 8vo, Mainz, 1847, p. 454.

and irregular edges, is all that is left to mark the point where the womb begins, and the canal leading to it ends. Often, though not invariably, a step preliminary to this occurrence is the formation of adhesions between the lips of the uterus and the contiguous surfaces of the vagina. Sometimes these adhesions are limited to one lip, often they involve both, and to them is in a great measure due that apparent shortening of the vagina which is very marked in many cases of uterine cancer, and which does not at all imply the previous occurrence of any descent of the womb. In the softer kind of medullary cancer, in which this condition is met with most frequently, and in the greatest degree, the surface of the portio vaginalis and the walls of the vagina become sometimes so completely fused together that a mere thickened ring is all that indicates the situation of the mouth of the womb. Even this, at length, becomes indistinct, owing to the extension of the cancerous disease along the vaginal walls, and the finger at last discovers no distinction between the uterus and vagina, but finds only that the uneven walls of the canal end in a cavity filled with a dirty putrilage.

It is almost needless to say that while disease advances thus at the lower part of the uterus, the rest of the organ is not left in a healthy state. If life is sufficiently prolonged, the deposit by degrees extends further and further upwards, till even as high as the ligaments of the ovaries, or sometimes higher still, the walls of the organ are thickened by infiltration of cancerous matter, or are completely converted into it. This, however, is not the only cause of that enlargement of the whole uterus which is met with in almost every case of carcinoma. In other organs of the body, the advance of cancerous deposit, and the wasting and disappearance of the proper tissue of the part, go on simultaneously and in equal proportions. In the case of the uterus, however, that disposition to growth and development of which we have seen so many illustrations, shows itself even during the progress of malignant disease. The walls thicken in parts which the cancer has not yet reached, for the increased afflux of blood brings with it an increased activity of growth; and

even in those situations where the malignant deposit is abundant, there remains up to a late period a layer of muscular fibre bounding it externally; the product, as I imagine, of new formation, not simply the residue of the original parietes of the organ.

But though the cancerous disease, either for the reason which I have assigned, or on some other account, as yet inexplicable, seldom reaches to, and involves the external surface of the womb, its mucous lining has no such immunity from disease. Its condition, however, is very variable. Sometimes nothing more is apparent than a general and intense redness of the interior of the womb; but much more frequently the uterine lining membrane is covered by a dark offensive secretion, and is beset here and there by small white deposits of cancer. If disease is more advanced, the mucous membrane is absent, at any rate from the lower part, of the uterine cavity, and the surface is uneven and granular from the infiltration of cancerous deposit into the uterine tissue. On one occasion, too, I found the whole interior of the womb lined by a white membraniform layer of cancerous deposit, beneath which its substance was irregular and granular, as if ulcerated.

This partial destruction of its mucous lining, and this granular state of its interior, occasion that roughness which the finger so constantly perceives when introduced within the orifice of the cancerous womb. There is, however, besides, in many instances of uterine carcinoma, a distinct, polypoid, cancerous outgrowth, which springs from low down in the cavity of the womb, or from the upper part of its cervix, seldom attaining any considerable size, but varying from month to month, and usually disappearing altogether as ulceration advances, and as the uterine structure is with its advance more and more extensively destroyed. Besides these, which are usually but temporary phenomena, there are distinct malignant polypi, concerning which I must say more presently, but about which it may suffice now to mention that they occur independently of disease of the os or cervix uteri, though they too become almost invariably involved in the progress of the cancer.

If now from the substance of the womb and its interior we pass to the study of the alterations which cancerous disease brings about on its external surface, we shall find occasion to notice many important changes, though none perhaps so striking as those which we have already observed. Many circumstances concur to produce that firm fixing of the uterus in the pelvic cavity which is observable in almost every instance of carcinoma of the medullary kind, except in its very earliest stages. It is partly brought about by a chronic form of peritonitis, which is generally though not constantly limited to the parts in the immediate vicinity of the pelvis, and which glues the womb to the rectum and bladder. This, however, is not its only cause, but infiltration of cancerous matter between the uterus and adjacent parts, and between the folds of the broad ligament, tends to fix it in the pelvis, and to form it and the parts connected with it into one immovable mass. These deposits usually take place on the visceral surface of the peritoneum, and are sometimes so extensive as to be the apparent occasion of a degree of wasting of the womb itself, which I have once or twice found in the midst of abundant medullary deposit, small and shrunk, and its outer surface rough, as if partially eroded or destroyed by the morbid structure. While these deposits are but inconsiderable, they may still be seen in small patches beneath the peritoneum; but with their increase the peritoneum too becomes involved, and at length is undistinguishable in the midst of the large mass of cancerous disease which conceals the uterus and its appendages from view. In cases where these deposits are most abundant, it is by no means unusual to find softened cancerous matter in the pelvic cavity, or between the folds of the broad ligaments; while sometimes the intestines are matted together above the pelvic brim, so as to form the upper wall of an irregular cavity lined with cancerous matter, while now and then a real fœcal abscess is formed by the extension of the disease to the intestines, and their consequent perforation.

More frequent than the actual destruction of the peritoneum by deposits of cancer beneath it, is the occurrence of numerous

small masses of the same substance on its outer surface. These are sometimes flat and sessile, like small tubercles distributed over it, at other times they are connected with the serous membrane by a small and slender membranous pedicle, similar to that by which small fibrous outgrowths are not infrequently attached to the fundus and adjacent parts of the womb. On two occasions I have also found in the midst of the cancerous substance which enveloped the uterus, serous cysts of the size of a filbert, containing a rather deep straw-coloured, transparent serum, their walls thin, their outer surface free, their inner connected with the uterus itself by the interposition of a layer of cancerous substance of uncertain thickness. In one instance, five cysts were present, and the material which surrounded them, and which also had matted together the uterine appendages, was intermingled fat and cancer substance. In the other case, there was only one cyst, but it also was surrounded by a very abundant deposit of cancer. These cysts showed no sign of endogenous growth in their interior, but appeared to be simple serous cysts, such as sometimes form on the exterior of the uterus, independent of any other disease. I am therefore uncertain in what relation they stood to the cancerous deposits, whether in that of mere accidental complication, or whether the connexion between the two was more intimate.*

Reference has already been made to the formation of adhesions between the uterine lips and the vaginal walls, and it is obvious enough that when this takes place the extension of disease to the substance of the vagina is almost sure to follow. It is matter of observation, however, that the anterior vaginal wall and the bladder are much more frequently involved by the advance of uterine cancer than are its posterior wall and the rectum. It has been attempted to explain this occurrence by the assumption

* In all the cases of serous cysts of the uterus described by Huguier in his very valuable Essay in vol. i. of the *Mémoires de l'Académie de Chirurgie*, chap. ii. pp. 295—325, and plates iv. and v., the cysts were sub-peritoneal. Those which I observed in the two cases above described were similar to the cysts delineated by Boivin and Dugés in plates xiv. and xxxiii. fig. 1 of their *Atlas*, but of which they give no particular description.

that cancer oftener attacks the anterior than the posterior lip of the uterus; but facts do not bear out this assertion, and my own experience, indeed, would rather lead me to the conclusion that cancer is oftener limited to the posterior, and that certainly the disease of the posterior lip is often further advanced than that of the anterior. The intimate connexion between the neck of the womb and the bladder, parts which are separated only by the intervention of a fold of the pelvic fascia, while posteriorly the peritoneum descends even below the level of the commencement of the portio vaginalis, accounts much more satisfactorily for the more speedy infiltration of cancerous matter into parts contiguous with the front than with the back of the organ, and consequently for the frequency of vesico-vaginal fistula, and the comparative rarity of communication between the vagina and rectum.

Though, perhaps, not strictly in place, it will yet be convenient to add a few words more about the affection of the bladder in cases of uterine cancer. It is by no means unusual, independent of any trace of cancerous deposit in the organ, to find the mucous membrane of the bladder intensely congested and of a deep red colour, sometimes inflamed, even ulcerated, pus covering its rugæ, and all the coats of the organ thickened, showing, what indeed the dysuria during the patient's life but too constantly announces, how close the sympathy is between the bladder and the womb. The mode in which the first anatomical evidence of positive disease of the bladder appears is not constant. Sometimes the mischief seems entirely to proceed from without inwards, and then at one spot, where the bladder and vagina are closely united, the mucous membrane of the former viscus may present a slightly flocculent appearance. If touched, it will be found to be softened; if pressed on with a probe, it will give way; the cancerous deposit has gradually destroyed all the intervening tissues, and a few days more would have sufficed for the production of a fistulous opening. In other instances, disease attacks the bladder, secondarily indeed, but independently of mere extension to it by continuity of tissue. Deposits of cancer, in the form of small flat whitish tubercles, take place beneath its

mucous membrane; not limited to that part where the uterus or the vagina and bladder are in immediate contact, though generally much more abundant there than elsewhere. These tubercles enlarge somewhat, though they do not coalesce nor attain any considerable size, but they destroy the mucous membrane above them, while that of the rest of the organ is generally inflamed, thickened, and sometimes even ulcerated. When the fistulous opening has once formed, the bladder undergoes all those changes which attend a vesico-vaginal fistula, however produced, only aggravated by the constant advances of the disease by which the fistula was occasioned.

But, to return to that more special study of cancer of the womb itself which is our present business, I may observe, that though the description of the disease already given holds good to a great extent of all forms of uterine cancer, there are *some varieties of the disease* in which deviations occur from its most common course. It has been stated as a general rule, that cancer begins in the neck of the womb, and this statement is open to almost as few exceptions as the directly opposite one with reference to the exclusive seat of fibrous tumours in the body of the organ. In two, however, out of one hundred and twenty cases of uterine cancer, the disease occupied *the body of the organ*, and ran its course to a fatal issue without the occurrence of ulceration of the os uteri, or of any change in its condition, such as during life could lead to the suspicion of its being the seat of malignant disease, though its tissue was found after death infiltrated with cancerous deposit. In both of these cases the enlargement of the uterus was very considerable; in one it measured six inches in length, and in the other was nearly as large as the adult head. This increase of size was due to the extreme thickening of the uterine walls by infiltration of cancerous deposit, which in one case had converted the whole organ into a tolerably uniform mass of soft, indistinctly fibrous tissue, of a dirty greyish-white colour, soaked in a dirty serum, very soft, but tearing most readily in a longitudinal direction, while no trace of mucous membrane was discoverable, nor any remains of uterine cavity beyond half an inch from the

orifice of the womb, which was small and circular, and outwardly presented no evidence of disease. In the other case, the walls of the uterus were similarly thickened, though in a less degree, and the uterine cavity was not obliterated, but a mass of soft medullary cancer, of the size of a walnut, projected into it, springing from a little above the situation of the internal os uteri. Externally, the lips of the os uteri were healthy, their surface perfectly smooth and of a vivid red colour. This character continued to just within the cervix, but there the mucous membrane at once became roughened, of a red colour, with dead white spots of cancerous deposit showing through it everywhere.*

Lastly, in connexion with those cases in which the os uteri escapes the cancerous deposit, or becomes affected only secondarily, some mention must be made of those rare instances in which *polypi of malignant structure* grow from the interior of the uterus, independent of previous disease of its orifice. Reference has already been made to the frequent formation of polypoid outgrowths of malignant structure during the course of general uterine cancer, but these outgrowths are for the most part of inconsiderable size, constitute but a small part of the general mass of disease, and disappear with the advance of the carcinoma. Now and then, however, at a time when the lips of the os are still unaffected, an outgrowth of cancerous tissue, generally of the medullary kind, springs from the interior of the womb, and descends into the vagina. The point of origin of such malignant polypi is usually low down in the cavity of the womb, or actually within the canal of the cervix, but occasionally they spring from its fundus. Of this a remarkable illustration is given by Boivin and Dugés, and an instance of it came under my own observation some years since at the Middlesex Hospital, into which institution a woman came to die, apparently of ascites. An abundant and very offensive vaginal discharge attracted attention to the state of her womb, when a polypus considerably larger than the

* A brief, but interesting account of several cases of this description, is given by Dr. Simpson, in his *Obstetric Memoirs*, &c., vol. i. p. 193.

fist was discovered in the vagina. After her death, in addition to extensive cancerous deposits in various abdominal viscera, the walls of the uterus were found thickened by medullary deposit, and its cavity distended by the polypus, which sprang by a pedicle half the size of the wrist from the fundus of the womb. The polypus was of a very soft texture, and possessed of considerable vascularity. One other case of cancerous polypus has come under my observation. The outgrowth was of much smaller size, and, as well as could be ascertained, sprang from low down in the body of the womb. It projected but a short distance into the vagina, and the lips of the os uteri looked healthy, though there was some degree of thickening and induration of the posterior lip. I believe, indeed, that though the formation of the malignant polypus may precede other disease in the womb, yet the cancer before long extends to the uterine walls, and I am not aware of malignant outgrowths having ever been found in an otherwise healthy uterus.

I believe that I have twice met with *alveolar cancer* of the womb, but in one instance only have I had the opportunity of corroborating my opinion by an examination after death. In that case the lips of the os uteri were nearly destroyed, and a layer of dense medullary carcinoma formed the base from which projected numerous semi-transparent warty granulations, occupying the whole interior of the uterus, and filled with a rather firm semi-transparent gelatinous matter, such as Lebert,* who appears to have met with this condition several times, speaks of as its characteristic.

The *epithelial* cancer of the uterus presents itself under two forms: either assuming the character of a granular outgrowth from the lips of the uterus, or else of an intractable ulceration of their surface. In its most characteristic form, the first variety is the *cauliflower excrescence* of Dr. John and Sir Charles Clarke; but of far more common occurrence are cases which, though essentially the same, present points of difference approximating them to ordinary medullary cancer.

* *Traité des Maladies Cancéreuses*, 8vo, Paris, 1851, p. 217.

In its very early stages, epithelial cancer* of the womb has never come under my observation; for the comparatively trifling symptoms to which it at first gives rise seldom force themselves upon the attention of our patients. When I have first seen it, the cervix of the womb has been already somewhat increased in size, the os uteri not open, but its lips flattened and expanded, so that their edge, which felt a little ragged, projected a line or two beyond the circumference of the cervix, while their surface was rough and granular to the touch. On introducing the speculum, this irregularity was seen to be produced by the aggregation of numerous small, somewhat flattened papillæ or granulations, of a reddish colour, semi-transparent appearance, and often bleeding very readily. Sometimes these granulations continue for many months, scarcely at all increasing in size or altering in character; and then on one or other lip an ulcer forms, with irregular, excavated edges, and the case, if then seen for the first time, would scarcely be suspected to have been other than one of ordinary uterine cancer. Generally, however, the small sessile papillæ increase in size, and form a distinct outgrowth from the whole circumference of the os uteri, of the size of an egg, an apple, or even of a greater magnitude. These growths are split up by deep fissures into lobules of various sizes, all of which, however, seem to be connected together at their base, though the fissures are so deep and their directions so various, that it is seldom possible, when the growth is of any size, to distinguish between them and the os uteri itself. The dimensions of these growths are not in general the same throughout, but they spring from the surface of the os uteri by a short thick pedicle or stem, the elongated and hypertrophied cervix, and then expand below into that peculiar cauliflower-like shape from which their name has been derived. Even the most careful

* I have retained the term *cancer* as applied to these varieties of malignant disease of the uterus, because I do not feel myself competent to form an independent opinion with reference to what is still a moot point between the highest authorities; and because the general tendency of epithelial and cancrioid diseases of the womb is to become associated during their progress with medullary cancer: often, indeed, they lose their own distinctive features completely, merging them in those of ordinary uterine carcinoma.

examination generally breaks down some of the tissue of the growth, and produces hæmorrhage; but if in spite of this the finger be carried down to its base, the substance will be found to become much firmer, and at the same time to be possessed of a degree of sensibility which, though but low, is much greater than that of the more depending part of the tumour. Sometimes the outgrowth is confined, at any rate at its commencement, to one lip, and may attain a considerable size before the other is involved in the disease.* This is more likely to occur if the posterior than if the anterior lip is affected, and for the obvious mechanical reason which accounts for every large polypoid outgrowth being flattened on its anterior surface, spheroidal on its posterior. The hollow of the sacrum allows more room for the development of any outgrowth than is afforded by the comparatively flattened anterior half of the pelvic cavity bounded by the rami of the pubes.

Though the vagina does not by any means escape from a participation in the disease, and a granular or papillary structure may be felt sometimes extending over its roof, and for some distance along one or other wall, yet this is by no means constant; and so long as the disease retains its original characters well marked, the disposition to involve adjacent parts is far less than in ordinary uterine cancer. The tendency, however, to pass into ordinary medullary cancer, or to become associated with it, is very strong; while we find that the tumour itself undergoes the same processes of alternate partial death and partial reproduction, as we have noticed in other forms of malignant disease. Usually the outgrowth in the course of time disappears in part, and the irregular, sharp-cut edge of the os whence it grew is at first felt granular and uneven within, but afterwards grows thicker and nodulated, assuming by degrees all the characters of a part which has from the first been the seat of medullary cancer, while the walls of the organ and its interior likewise undergo just the same changes.

* Of which there is a very characteristic drawing in Boivin and Dugés' *Atlas* plate xxiv. fig. 1.

Between this disease and genuine cauliflower excrescence the differences appear to be of degree rather than of kind. In the latter, indeed, the epithelial cells which compose it are of the cylindrical form, but its more obvious peculiarities consist in the larger size of its vessels, in the greater delicacy of their walls, and in their being covered by a thin investment, not bound together into a comparatively solid mass by connecting tissue, but "hanging in fringes almost like a mass of uterine hydatids;"* while the base of cancer substance, which in the more solid growths is deposited very early, in the delicate and vascular cauliflower excrescence is not formed till a much later period, or even not at all. Their intimate structure, however, and their microscopic elements are just the same, and both consist of hypertrophied papillæ, composed of epithelial cells richly supplied in their interior with large and delicate vessels, and covered with a thickened layer of epithelium. The enormous looped capillaries of the cauliflower excrescence explain the abundant hæmorrhages and the profuse serous discharges which attend it, while the absence of that solid structure which is found in other forms of epithelial cancer, accounts for the peculiarly favourable results that have followed its extirpation, and also for the fact that after its removal a few shreds are all that remain of what had seemed to be a large and firm tumour.

Difference of opinion exists as to the exact nature of those *intractable ulcerations* of the os and cervix uteri, which, in accordance as I believe with the preponderance of authority on the subject, I have referred to epithelial carcinoma, but which are alleged by some very competent observers to be tuberculous. When speaking of uterine tubercle, I made mention of numerous

* This not inapt comparison is made by Virchow in his description of the microscopic structure of these growths, in the *Verhandl. der Phys. Med. Gesellschaft in Würzburg*, vol. i. p. 110, which harmonizes with and completes previous observations. Very good representations of the general aspect of these growths are given by Sir C. Clarke in vol. ii. pl. i. of his work on *Diseases of Women*; by Dr. Simpson, at pp. 165 and 166 of his *Obstetric Works*; and by Dr. Mayer, in vol. iv. of the *Verhandl. der Ges. f. Geburtsh. in Berlin*, which also contains a drawing of the appearances presented under a low magnifying power.

small deposits of a yellowish colour sometimes met with on the surface of the os uteri, and which, if punctured, or if their contents escape spontaneously, sometimes leave behind small slightly excavated ulcers. Their tuberculous character did not, however, appear to me to be clearly substantiated, since I had never observed any general fusion of the deposits, and consequent breaking down of the tissue of the cervix. M. Lisfranc,* however, has described a condition which has never come under my own notice, but which has been seen and described by M. Robert,† M. Pichard,‡ and others, who relate cases illustrative of its character, and who refer it to the breaking down of tubercular deposits in the substance of the cervix.

“These tubercular ulcerations of the cervix uteri,” says M. Robert,§ “may be recognised by their excavated base, their greyish appearance, and the presence of a caseous matter in the midst of the muco-purulent discharges which come from the interior of the cervix. They may also be known by the presence in the cervix of tumours of uncertain size, of a rounded form, at first firm and with no change of colour, afterwards soft, whitish, yielding to the pressure of the fingers, and giving an indistinct sense of fluctuation. These tumours are formed by the tubercular matter still in a crude state, or in course of softening.

“It is, moreover, to be observed that these scrofulous ulcerations are almost always accompanied by considerable engorgement of the cervix uteri, a condition which is due either to the presence of masses of tubercle still unsoftened, or to some tubercular infiltration still remaining, or lastly, to that inflammatory process which accompanies the softening and elimination of this kind of morbid product. This last circumstance may obscure the diagnosis of the case, and lead to the belief that the engorgements or the ulcerations are of a malignant character, an error which Lisfranc confesses that he fell into several times.”

* *Clinique Chirurgicale*, &c., vol. iii. pp. 548—553.

† *Des Affections, &c., du Col de l'Uterus*, 8vo, Paris, 1848.

‡ *Des Abus de la Cautérisation, &c., dans les Maladies de la Matrice*, 8vo, Paris, 1846, pp. 124—132.

§ *Op. cit.*, p. 48.

These appearances, however, receive a different interpretation when the microscope is called in to aid our researches. The softened matter is found not to consist of the elements of tubercle, but of epithelial cells similar to those of the uterine mucous membrane, while the indurated, callous structure which forms the base of the ulcer is formed of a mixture of fibro-plastic and epidermoid materials. In short, as M. Robin* says, this kind of ulcer is to the uterus what lupus or canceroid ulcers are to the face, the chief differences between them depending on the constant exposure of the latter to the air, and the constant contact of the other with the mucus and other secretions of the vagina.

One affection still remains to notice, which, though less strictly deserving to be ranked with cancer than were those varieties of malignant disease which we have just now been studying, yet will find here perhaps its fittest place. The late Dr. John Clarke was the first writer who described under the name of *corroding ulcer* a peculiar form of destructive ulceration of the os and cervix uteri, beginning at the mucous membrane which covers it, involving the whole circumference of the os, and utterly destroying both it and the subjacent parts, but differing from carcinoma in the absence of any thickening, hardness, or deposit of new matter in its vicinity. Not to dwell on certain differences between its symptoms, and those of ulcerated carcinoma, the fact that the corroding ulcer may continue for several years without causing any very formidable symptoms, while death takes place speedily as well as inevitably in ulcerated cancer, points to some essential difference between the two diseases.

Its real nature has given rise to much difference of opinion, and the rarity of the affection has been a great obstacle to the thorough understanding of its nature. There can be no doubt,

* The conjoint testimony of Robin, *Archives de Médecine*, August, 1848, pp. 407—411; of Lebert, *Maladies Cancéreuses*, p. 218; and of Hanover, *Das Epithelioma*, 8vo, Leipzig, 1852, p. 126, may be taken as decisive on this point. It is, I think, extremely doubtful whether Dr. Gibbs's case of alleged extensive tuberculous ulceration of the uterus and bladder, described at p. 269 of vol. vi. of *Transactions of Pathological Society*, ought not rather to be referred to this category.

however, but that it ought to be classed with rodent ulcers, as indeed it has been by all recent microscopic observers, for, like them, its aspect, rate, and mode of progress are unlike those of cancer, while neither cancer cells nor epithelium formations are present in the adjacent tissues.*

One point only connected with the morbid anatomy of uterine cancer still remains for notice, and that concerns the *frequency with which other organs become affected* in the course of the disease. I apprehend the number of cases to be very few indeed in which cancer has not extended before the death of the patient by continuity of tissue from the uterus itself to some of the parts immediately adjacent. Thus, for instance, it is certainly very unusual for a patient to die of uterine cancer, in whom there does not exist some degree of cancerous infiltration into the upper part of the vagina; and, as we shall see hereafter, the frequency of this occurrence, even at a comparatively early period of medullary cancer, is one of the circumstances which most of all interferes with the success of operative proceedings for its cure, and which oftenest contraindicates any attempt at their performance. There does, however, seem to be reason for believing that carcinoma of the uterus is oftener at its commencement confined to one part, and that it continues so for a longer period than does cancer when situated in any other organ of the body. M. Lebert† states that the evidence of general infection of the system, as manifested by secondary deposits in other organs, existed in only a third out of forty-five cases of uterine cancer, but in twenty-four out of thirty-four, or in five-sevenths of the number of cases of cancer of the breast. These results, however, are more favourable than those which the late Professor Kiwisch deduced from seventy-three post-mortem examinations of uterine cancer made in the hospital at Prague. He found cancer of the bladder in forty-two per cent. of his cases; Lebert‡ only in thirteen per cent.; of the ovaries in nineteen; and of the lungs in 7·5 per cent.; while Lebert met

* Hanover, *op. cit.*, p. 128.

† *Op. cit.*, pp. 239, 310, 394.

‡ *Op. cit.*, vol. i. p. 511.

with each of them only in the proportion of 4·4 per cent. These discrepancies, which I am not able from personal observation to explain, are yet probably due to the different forms of cancer having occurred in different proportions at Paris and at Prague ; possibly to the greater frequency of epithelial cancer in the former city, and of medullary cancer in the latter. In any future statistical table showing the frequency of cancerous infection of the system, it will obviously be necessary to refer the cases to different categories according to the character of the primitive disease. In the mean time the knowledge of the fact that such infection of the system occurs less invariably and less early in cancer of the womb than in other forms of the disease, may serve to throw a feeble ray of hopefulness over the gloomy prospect which we have now to contemplate from other points of view.

LECTURE XIX.

MALIGNANT OR CANCEROUS DISEASES OF THE UTERUS.

Their frequency ; causes influencing the occurrence of cancer, as age, state of the menstrual function, its mode of establishment, child-bearing, influence of child-bearing accounted for ; hereditary tendency.

Symptoms of cancer ; mode of onset, and first symptom. Pain, its character, and causes. Hæmorrhage, its import ; frequent as a first symptom, and why.

Discharges ; cause of their offensive character, and of variations in this respect.

Cancerous cachexia ; its characters.

Two exceptional forms of cancer, the latent and the acute.

Influence of cancer upon labour.

Duration of the disease.

ONE of the reasons which at the commencement of the last Lecture I assigned for occupying much of your time with the study of carcinoma of the uterus was the *frequency* of its occurrence. Our tables of mortality, indeed, do not at present enable us to learn with complete accuracy how often it is met with, but they furnish data from which it is not difficult to make a tolerable approximation to the truth. It appears from the Fifteenth Report of the Registrar-General,* that the mortality from cancer throughout England, in the year 1851, amounted to 1502 males, 3716 females. The whole of this excess of female mortality from cancer may be confidently attributed either to cancer of the breast or of the womb. According to Tanchou's tables,† however, deduced from the mortuary registers of Paris, cancer of the womb was more frequent than cancer of

* See p. 122.

† *Recherches sur le Traitement Médical des Tumeurs Cancéreuses du Sein*, 8vo 1844, p. 258.

the female breast, in the proportion of 2996 to 1147, or as 2·6 to 1. Neither this statement, however, nor the assertion which he also makes, that uterine cancer was the cause of 1·6 per cent. of all female deaths during the decennial period to which his calculations refer, can be received as absolutely correct, though it is my impression that neither the one nor the other deviates much from the truth.

I have already referred more than once to the circumstances which render the statistics of a large hospital inconclusive as evidence of the comparative frequency of different diseases. The sufferings that generally attend cancer in some of its stages, and the costly nature of the remedies by which these sufferings are best assuaged, induce a very large number of patients afflicted with that disease to seek relief at a wealthy institution like St. Bartholomew's Hospital, and I have no doubt but that my own experience there would, without allowing for these causes, lead me to suppose cancer of the womb to be even more common than is actually the case.* But though this be so, the disease still remains, of all organic affections of the womb, alike the most frequent and the most terrible.

We light at once upon surer ground if, from the attempt to determine its exact frequency, we pass to the inquiry into the circumstances that favour its development; the influence of age, of marriage, child-bearing, &c., upon its production.

Dr. Walshe,† whose erudite work on cancer will always continue to be, with reference to many points, the best authority on the subject of which it treats, was the first to show that there is a progressive increase in the frequency of cancer with the advance

* Dr. Lever, on *Diseases of the Uterus*, 8vo, London, 1843, p. 165, states that among the out-patients of Guy's Hospital, the proportion of cases of uterine cancer to other uterine diseases was nearly as 1 in 7, or 13·5 per cent. At Bartholomew's I find the proportion to be 1 in 18·2, or 5·4 per cent.; numbers which I mention merely as showing how unsafe it would be to draw any inferences as to the comparative frequency of that, or, indeed, of any other disease, from such data as are afforded by the out-patient books of a hospital.

† *Op. cit.*, p. 140.

of age. I hardly need observe that the frequency of any disease at different ages can be rightly estimated only by a comparison of the number of cases in which it occurs, with the total population at the same age; though from neglecting this obvious condition erroneous conclusions have sometimes been drawn with reference to this and other similar questions.

Taking the population of England, however, at decennial periods, it seems, and Mr. Paget's researches lead to the same result, that with every ten years of additional age after the age of twenty, the liability to cancer steadily increases. A fact this of great interest, showing how a disease of constitutional degeneracy grows more and more common with the enfeebling of the powers of nutrition, and attains its greatest frequency when nature's alchemy has well nigh reached its end, and the power to transmute the rough material into the highly organized and wonderfully complex tissues of the body is almost gone. But it is scarcely less interesting to find that when a part has outlived its uses it often begins to die, and that the greatest frequency of cancer of the breast and of the womb is not governed by the same law as prevails with reference to the disease in other parts, but occurs long before the ordinary period of human life has been attained.

"The age of most frequent occurrence of scirrhus cancer of the breast," says Mr. Paget,* "is between forty-five and fifty years. Nearly all records, I think, agree in this. The disease has been seen before puberty, but it is extremely rare at any age under twenty-five; after this age it increases till between forty-five and fifty, and then decreases in frequency; but at no later age becomes so infrequent as it is before twenty."

This statement, too, he illustrates, not simply by the absolute numbers of cases which he has collected, but likewise by comparison with the population at different ages.

Much the same fact holds good with reference to uterine

* *Op. cit.*, vol. ii. p. 324.

cancer, as is shown by the subjoined table of the ages of the patients in 426 cases,* collected from various sources.†

				Actual Number.	To whole population at respective ages: the numbers being reduced for convenience to propor- tions of 10,000.
Between	25	and	30 years,	25	1 in 134
"	30	"	40 "	112	1 " 21
"	40	"	50 "	178	1 " 9.7
"	50	"	60 "	71	1 " 16.6
"	60	"	70 "	35	1 " 23.6
Above			70 "	5	1 " 108
				426	

Though the period of a woman's life exerts so great an influence in predisposing to cancer of the womb, it yet does not appear that the actual cessation of the menses has any important share in calling that predisposition into activity. In six out of eighteen of Lebert's cases,‡ in which menstruation had already ceased, the commencement of the disease was stated to coincide with the cessation of the menses. The same coincidence, however, was observed only in three out of twenty-six of my patients in whom menstruation had already ceased. In two even of these the symptoms were said to have existed for eight and ten years respectively, so that all which can be reasonably alleged concerning them is that indications of uterine disease had persisted ever since the menstrual crisis, and that at length cancerous disease had become developed. In one case the first symptom of cancer appeared within eight months, in one in a year, in two in three

* Of these cases 120 are from my own notes; the remainder are collected from Lebert, Kiwisch and his editor Scanzoni, and Chiari. I purposely do not include the often-quoted table given by Madame Boivin (*op. cit.*, vol. ii. p. 9), because it was drawn up at a time when other diseases were not infrequently confounded with cancer, and that her facts are vitiated by this error is abundantly evident.

† It would of course be far more satisfactory, if it were possible, to state the real number of deaths from cancer of the womb in this country, and to compare them with the actual numbers of the female population at the different ages. In default of this, which yet the next Report of the Registrar-General will probably enable us to do, the numbers given above serve to show not the *actual*, but the *relative* prevalence of the disease at different ages.

‡ *Op. cit.*, p. 275.

years, and in the remaining nineteen at periods varying from four to twenty-nine years from the cessation of the menses.

The antecedent condition of the patient's uterine functions, as far as the presence or absence of menstrual disorder, or of previous disease of the womb is concerned, is not without interest from the negative result which it yields, and from the evidence thus afforded, if farther proof of the fact were wanting, that no relation whatever subsists between inflammatory affections of the womb and the subsequent occurrence of cancer of the organ.

In 108 out of the 120 cases, the manner in which the menstrual function was usually performed, was made the subject of special inquiry. In 94 cases it was performed in all respects naturally, from the time of its complete establishment until the commencement of the disease. In 14 cases it was either habitually or frequently unnatural in some respect or other—viz :

- In 1 scanty
- „ 6 painful
- „ 4 postponing
- „ 2 irregular
- „ 1 anticipating.

If the inquiry be made with reference to the first establishment of menstruation, we shall as little find anything indicative of a special connexion between the difficult establishment of the menstrual function and the subsequent development of cancer. In 73 out of 97 cases, menstruation was established without any untoward symptom, while in 24 instances its first occurrence was attended by more or less local or constitutional suffering. These numbers yield the proportion of 24·7 per cent. of unfavourable cases, while the average which I obtained from all patients who came to me at St. Bartholomew's Hospital on account of uterine ailments was 25·7 per cent. of unfavourable cases; and Mr. Whitehead, of Manchester, arrives at 22·30 per cent. as the proportion of unfavourable cases among 4000 women not suffering from any special disorder of their sexual system.

But though it should appear that in these cases neither the first establishment of menstruation nor the manner of its ordi-

nary performance has presented any striking deviation from health, it may yet be supposed that we shall find indications of previous uterine disorder, (as some suppose of uterine inflammation,) out of which the cancerous disease has been subsequently developed. Evidence, however, seems to be directly opposed to this supposition, for in the history of only 3 out of the whole 120 cases is there any mention of serious uterine ailment previous to the commencement of the cancer. One patient had had a polypus removed ten years before, and 2 stated that they had suffered ever since their last confinement; ten years before in the one instance, and three in the other, from symptoms of uterine affection.

Though ample proof to the contrary has been long since adduced, we still find it asserted sometimes that single women and those who have had no children are most liable to be attacked by cancer. The truth appears to be the direct reverse of this statement; for out of 118 of the 120 cases on which my remarks are chiefly founded, there were but 2 in which the patients were single women, and only 7 in which they were sterile. In other words, there was but one sterile marriage in every 16·6 of the cancer patients, while the general average among my patients at St. Bartholomew's Hospital was 1 sterile marriage in every 8·5. Nor is this all; but the further we carry this inquiry the more strikingly does it appear, not that sterility, but rather that over-fecundity, predisposes to uterine cancer.

As already stated, only 7 out of 116 married women affected with cancer were sterile, while the remaining 109 had been pregnant 740 times, 128 of the pregnancies terminating prematurely, 612 at the full period. Or, to state the same fact somewhat differently, there was an average of 6·8 pregnancies to each marriage, or 5·6 children at the full period, and 1·2 abortions, while the number of children per marriage in this country generally is estimated at 4·2.

Some of these points will perhaps be still better illustrated by the subjoined table:—

Number of women.	Pregnancies to each.	Number of women.	Children to each.	Number of women.	Abortions. to each.
12 . . .	1	13 . . .	1	26 . . .	1
12 . . .	2	11 . . .	2	16 . . .	2
8 . . .	3	14 . . .	3	7 . . .	3
2 . . .	4	6 . . .	4	4 . . .	4
9 . . .	5	12 . . .	5	3 . . .	5
12 . . .	6	11 . . .	6	1 . . .	7
11 . . .	7	10 . . .	7	1 . . .	11
7 . . .	8	6 . . .	8	...	...
6 . . .	9	7 . . .	9	...	...
4 . . .	10	7 . . .	10	...	...
9 . . .	11	1 . . .	11	...	...
6 . . .	12	3 . . .	12	...	...
4 . . .	13	2 . . .	13	...	...
2 . . .	14	2 . . .	14	...	...
1 . . .	16	1 . . .	17	...	...
1 . . .	18	1 . . .	18	...	...
1 . . .	20	...	...	...	...
1 . . .	24	...	...	...	...
109		107		58	

The table explains itself sufficiently to render comment superfluous. One fact only seems worth remarking on—namely, that there were but two out of the whole 109 women whose pregnancy had issued merely in abortion.

In 11 of the 109 cases, the particulars of which are given in the annexed table, the termination of the patient's pregnancy occurred within a sufficiently short period from the commencement of the symptoms of cancer, to warrant the suspicion that, in some of them at least, the changes of the puerperal state had a share in calling the disease into activity.

Number of Pregnancy.	Number of Children.	Number of Abortions.	Issue of last Pregnancy.	Date of Symptoms of Cancer.
3	3	...	Live Child.	10 months
7	6	1	"	6 "
12	12	...	"	6 "
4	3	1	"	Immediately
10	7	3	"	"
9	9	...	"	"
2	1	1	"	"
6	2	4	"	"
7	5	2	"	"
11	10	1	Abortion at 5th month.	"
7	6	1	Ditto at 2½ months.	"

All of these patients were seen by me within fifteen months, most of them within six months from the occurrence of abortion or labour. When the symptoms are stated, as in eight instances they are, to have come on immediately, it is meant that there was no interval of health between the patient's delivery or miscarriage and the occurrence of hæmorrhage, or some well-marked symptom of cancer, such as had continued in each case to characterize it subsequently, and which in most instances was present at the time of the patient coming under my care.

A few moments' consideration will, I think, do away with any feeling of surprise at the result which these tables show. With old age comes imperfect and perverted nutrition, and with it cancer in the body generally, increases in frequency. Such old age, such imperfect nutrition, befall the womb earlier than they do other organs, and cancer becomes developed there proportionately early. With each successive pregnancy the development of the womb is less and less perfectly accomplished, and the feeble uterine action of the multipara, the greater comparative frequency of hæmorrhage after delivery, and even of rupture of the uterus in women who have given birth to several children, than in those who are in labour for the first time, are but so many different illustrations of the same fact. It is not therefore the woman who has never conceived, but she whose uterus has oftenest undergone all the changes which the puerperal state brings with it,—the fatty degeneration of its fibres, the wasting of its tissue, the most profound disturbance of its nutrition,—in whom this disease of perverted, imperfect nutrition is most frequent. Nor is the fact without its significance as illustrative of the same law, that in 8 out of 82 women living in fruitful marriage, in whom cancer of the womb came on before the fiftieth year, or, in other words, before the period of sexual vigour was passed, the very moment at which the important changes of the puerperal state were going on, the very time when the nutrition of the womb was most disordered, should have been that at which, one might

almost say out of which, this disease so insidious and so fatal was developed.

One point still remains for notice with reference to the production of cancer—namely, the influence of hereditary predisposition in favouring its development. In the case of cancer generally, the influence of constitutional taint has been ascertained to be very real; nor does it appear to be less so in the case of cancer of the womb, though the number of observations bearing on the subject is perhaps too small to warrant a positive opinion. Of 160 cases of cancer of all parts, collected by Paget,* 26, or 1 in 6·1 presented the history of hereditary cancerous taint; and the same fact was ascertained with reference to 14 in 102, or 1 in 7·2 of the cases referred to by Lebert.† Lebert found evidence of hereditary tendency to cancer in 2 out of 13 cases of cancer of the womb;‡ and it existed in 7 out of 44 cases, or in 1 of 6·2, in which I made this point the subject of inquiry. In 1 of the 7 cases the patient's father had died of cancer of the throat; in 2 the mother; and in 4 the sister had died of cancer of the womb.

There are three *symptoms* of cancer of the womb so almost invariable in their occurrence that the merest tyro would not fail to mention them, and the man of greatest experience would still enumerate them as its grand characteristics. Pain, and hæmorrhage, and vaginal discharge often co-exist in the advanced stages of the disease, and one or other of them is present from its commencement, or furnishes us at least with the first evidence of its existence. The once common error, however, which confounded under the name of scirrhus a variety of uterine ailments that had no real relation whatever to malignant disease, led to equally serious misapprehension of the import of these symptoms. Hæmorrhage was supposed to be the invariable evidence of ulceration having occurred, while pain and constitutional disorder, and sundry forms of functional disturbance, both of the womb and of adjacent viscera, were imagined to characterize the first or so-called scirrhus stage of the disease.

* *Op. cit.*, vol. ii. p. 538.

† *Op. cit.*, p. 134.

‡ *Ibid.* p. 273.

In 116 cases the first symptom of cancer was stated by the patient to have been—

In 23 instances, or 19·8 per cent.,		pain of various kinds, and of various degrees of intensity.	
„ 50	„	43·1	„ hæmorrhage, generally profuse, without pain.
„ 13	„	11·2	„ hæmorrhage, accompanied by pain.
„ 12	„	10·3	„ pain and leucorrhœa, or watery discharge, sometimes offensive.
„ 18	„	15·5	„ leucorrhœa, or other discharge without pain.

Each of these symptoms deserves a more careful examination ; and first with reference to the pain. Both at the commencement, and through the whole course of the disease, this varies greatly in situation, in character, and in intensity ; and there is no one kind of pain which can be regarded as peculiar to uterine cancer in any stage of its progress. Under the term pain, too, must be included various uneasy sensations experienced during the act of defæcation or micturition, the result sometimes doubtless of the disease having at an early period affected the bladder or the bowel, but oftener the consequence of the congested state of the pelvic vessels, or of that sympathy between the womb and other pelvic organs of which in the course of all uterine ailments, one meets with so many illustrations. As a general rule, the pain of the early stage of cancer is not severe ; it is by no means constantly referred to the uterus, but is more often spoken of as backache, or pain in the loins, wearying by its constancy rather than by its severity. With this is associated in some instances pain in the hypogastrium, usually of the same dull character ; but hypogastric pain alone, and unaccompanied by backache, is decidedly unusual. Lancinating pain, decidedly referred to the uterus, is not common at an early stage of cancer, neither is the organ in general tender to the touch, and in not a few instances even sexual intercourse does not appear to be

attended by any special suffering. As in other forms of uterine disease, pain is occasionally referred to one or other iliac region, and, like ovarian pain in general, is marked by a tendency to exacerbation in paroxysms. In those cases in which the disease sets in with menorrhagia, the excessive loss of blood is often accompanied with much pain ; but, as appears from the table, the majority of cases of hæmorrhage at the outset of cancer are characterized by the absence of pain ; while the cessation of the previously profuse bleeding is often associated with the setting in of pain, from which the patient was previously free.

With the advance of the cancerous disease, pain in general increases much in severity ; though there is no invariable rule which determines either the amount or the seat of the chief suffering ; while in by far the greater number of cases the severest pain is experienced long before the patient's death, and the last months of existence, when all the evidences of the cancerous cachexia are most marked, and the strength is daily declining, are happily not in general agonized by intensity of suffering such as had been previously endured. The causes, however, which contribute up to a certain point to increase the patient's sufferings as her disease advances are many, while all the old sources of distress continue. Pain referred to the uterus is now often superadded to the former pain in the back and the abdomen, and this pain, though constant, has its exacerbations, in which it becomes utterly intolerable, is sometimes described as a burning pain, sometimes as a stabbing pain ; while when most intense it is a horrible agony, which can be likened to no other suffering, of which words seem unable to convey any idea. Every night generally brings with it increase of suffering ; but the fits of the sharpest pain are uncertain in their occurrence, and appear to come on without any exciting cause. Sometimes the severer pain precedes an outburst of hæmorrhage, and then the bleeding gives relief for a time, but in many instances this is not the case. Besides the old hypogastric pain, from which the patient often suffers in the earlier stages of this disease, there are now frequent attacks of circumscribed abdominal pain and

tenderness, indicative of the peritoneum covering the pelvic organs having been attacked by inflammation, and such inflammation comes and goes several times in the course of the disease. The advance of the disease from the uterus itself, along the walls of the vagina, adds much to the patient's sufferings, and does so especially when the anterior vaginal wall is thus affected. In this case the infiltration of cancer into the tissues at the upper part of the vagina interferes with the return of blood from parts quite uninvolved in the disease. Hence the great swelling of the urethra, which may often be felt of the size of two thumbs all the way from the symphysis pubis to the bladder, and hence in a measure the frequent desire to pass water, and the difficulty in voiding it, which so greatly harass patients with cancer of the womb. But other causes besides tend to aggravate this symptom. It is, as we saw when studying the morbid anatomy of cancer of the womb, by no means unusual for the bladder, independent of the extension to it of malignant disease, to be the seat of intense congestion, or of inflammation going on to the deposit of lymph on its rugæ, or to actual ulceration of its mucous membrane. Moreover, the extension of cancer from the uterus or vagina into the bladder is usually accompanied by much severer suffering than is experienced in primary malignant disease of that organ, while, when once utero or vagino-vesical fistula has been formed, sufferings from a new source are entailed upon the patient. In some instances, too, when there is much deposit of cancerous matter about the bladder, one or other ureter is obstructed, though not in general absolutely closed, and it becomes much dilated, running a tortuous instead of a straight course, while its walls are greatly thickened; and the kidney itself, owing to the difficulty in the performance of its functions, and in the escape of its contents, wastes, its glandular structure almost completely disappearing, its calices being dilated into a number of sacculi, distended by a urinous fluid.* In a minor degree,

* See, for remarks on this condition of the kidney, Cruveilhier, *Anatomie Pathologique*, vol. ii. p. 370, and *Atlas*, livraison xxvii., pl. ii. fig. 2.

this occurrence is by no means unusual, and to it must, I think, be attributed a measure of the back-ache and of the dysuria from which patients with uterine cancer suffer.

And now, before passing to the examination of another symptom, something ought to be said with reference to those few exceptional cases in which cancer of the womb runs its course entirely, or almost entirely, without pain. It cannot be too constantly borne in mind, that in many instances the three grand symptoms of cancer, pain, and hæmorrhage, and offensive discharge, are not present at the same time. The disease often sets in with hæmorrhage, and often while the bleeding lasts no pain is experienced, nor fœtid discharge perceptible. At a later stage the bleeding ceases, the pain then becomes severe, and the discharge offensive, and continues so to the end, though the pain frequently subsides, sometimes altogether ceases long before the patient dies. Most of the errors in the diagnosis of uterine cancer which have come to my knowledge, have arisen from forgetfulness of this fact; and the absence of pain or of fœtor of the discharge has been assumed to negative the possibility of cancer, in spite of the clearest evidence afforded by vaginal examination of its existence. It is, however, a very rare occurrence indeed for pain to be absent through the whole course of cancer, though by no means unusual for the disease to have made great progress before any suffering is experienced. Though not invariably, yet in the majority of cases, it is the epithelial variety of cancer which is distinguished by this absence of pain. Still, in some of the soft varieties of medullary cancer, I have observed the same thing. One patient, a young woman, aged thirty, was not aware of the existence of any serious disease, until a profuse discharge of blood took place on one occasion during sexual intercourse; and I knew another who imagined herself to be suffering merely from menorrhagia, to have had intercourse with her husband, and not to have supposed her ailment to be serious till abortion at the sixth week of her pregnancy destroyed her by the hæmorrhage which accompanied it. In both of these cases the disease was of the medullary kind. The most remarkable

case, however, which I have met with, and indeed the only instance in which no pain at all was experienced, was that of a woman aged thirty, who had menstruated irregularly for three years, though without any symptom of local ailment, and had recovered but imperfectly from her sixth labour fourteen months before she came under my notice. Eleven months before I saw her, she had sudden and very profuse hæmorrhage, which continued for eight weeks, and was then succeeded by abundant transparent, non-offensive discharge. From that time until her reception into the hospital, the hæmorrhage or the watery discharge had been constantly present, and the patient was admitted, in a state of extreme exhaustion, on the 15th of July. Rest and astringents checked both the bleeding and the discharge, and food and wine restored her strength so far, that on the 30th she went home to arrange some domestic matters, but on my representation of the serious nature of her disease, she returned on the 5th of August. Hæmorrhage recurred the next day and continued for ten days, but on the 21st she was so far recovered, and had regained so much strength, that all my persuasions to induce her to remain were ineffectual. She went home; on the 1st of September, hæmorrhage returned, and of this she died on the 5th, having throughout had no other sense of discomfort than some difficulty in micturition, from which she had suffered for two years, and which was not at all increased in severity by the supervention of the cancerous disease.

Next on the list of symptoms stands hæmorrhage; and contrary to what is still laid down in some books, bleeding, so far from being a proof that the disease has reached the stage of ulceration, is often the earliest sign of its existence, since it is mentioned in forty-three per cent. of the cases as preceding any other ailment. A similar error, as you scarcely need to be reminded, was once generally current with reference to hæmorrhage from the lungs in phthisis. The hæmoptysis, which we know to be in many instances due to congestion of the lung, and to be the herald of coming mischief, was supposed to be the proof of irremediable injury already inflicted, of the giving way

of a vessel in consequence of its being involved in the spread of the ulceration. The same explanation as accounts for the bleeding in the one case may be admitted as interpreting it in the other; and the practical inference to be drawn from this fact, concerns the extreme importance to be attached to causeless hæmorrhage from the womb, the urgent need for making a vaginal examination by which we may detect some forms at least of malignant disease, at, or near their outset, at a time when remedies can retard their progress, when surgery may perhaps altogether remove them.

Hospital practice gives so little opportunity for tracing cases of chronic disease from their commencement to their close, that I can give no definite statement as to the general relations borne by hæmorrhage to the other symptoms of cancer throughout its whole course. The form in which the bleeding first shows itself is very various. Sometimes it is a draining of blood, not profuse, but continuous, resembling the discharge at an ordinary menstrual period, except that it may not have come on at the right epoch, and that it generally continues for a longer time, until it excites anxiety by its persistence, or in other instances by the frequency of its return. It sometimes assumes these characters in the aged, in whom all the sexual functions have long ceased, but who at first regard the reappearance of a sanguineous discharge with a sort of half complacency, as though it were an evidence of their rejuvenescence; but it is not in the aged alone that this form of hæmorrhage takes place. It is, however, more common for hæmorrhage to take place either at a menstrual period, or a day or two after its cessation; but though an ill marked periodicity is generally observable in all hæmorrhages from the womb, whatever be their cause, and whatever the age of the patient in whom they occur, it is certainly unusual for menstruation in cases of cancer to continue regular in its return. Sometimes menstruation anticipates, at other times there is a bimonthly hæmorrhage, the discharge at each period presenting an equal claim to be regarded as menstrual; but it is not often that the proper period continues to be recognisable after two or

three returns of bleeding. A few cases occur of a single profuse outburst of blood, not followed by any return of hæmorrhage, or merely by the occasional admixture of sanguineous fluid with the discharge which takes place at other times. Profuse lochial discharges have once or twice passed, according to the patient's statement, into a hæmorrhage which has been the first evidence of cancerous disease; but, of course, the cases in which this is observed are rare and exceptional.

In the early stages of cancer, the bleeding is, as the table shows you,* most frequently unaccompanied by pain, though to this there are some exceptions. With the advance of the disease, pain is generally associated with the hæmorrhage; for with the exception of cases of epithelial cancer, in which the delicate vessels give way under the slightest cause, congestion of the womb generally precedes each outburst of bleeding, and is relieved by its occurrence. The source of the hæmorrhage continues to be the same after ulceration has taken place as it was before, and the blood is furnished much less by the diseased surface than by the whole mucous membrane of the womb. The expulsive uterine pains which in many instances accompany the hæmorrhage, are due to the same cause as in ordinary menorrhagia—namely, the formation of coagula within the cavity of the womb, and the efforts of the womb to expel them; efforts which are all the more painful, owing to the resistance which they encounter from the unyielding tissues infiltrated with cancerous matter. There is no stronger evidence that the ulcerated surface furnishes but a small part of the bleeding, than is afforded by its invariable diminution, often by its complete cessation in the advanced stages of cancer, while in not a few instances in which the process of ulceration has been most rapid, and the destruction of tissues most extensive, there has been but little bleeding, or the hæmorrhage has been entirely confined to the outset of the disease. A woman, aged thirty-eight, came into St. Bartholomew's Hospital to die of cancer of the womb, and sank on the second day after her admission.

* See p. 366.

The posterior lip of her uterus was completely destroyed, and the finger passed up at once into its cavity, whence there projected an irregular, sprouting growth. The anterior lip of the uterus was firmly adherent to the anterior vaginal wall, along which the cancerous disease had extended to within an inch of the vulva, while the lip itself was irregular, thickened, and in great measure destroyed by ulceration. A single attack of hæmorrhage, lasting for five hours, was the index of the commencement of her illness eight months before. Abundant and often fœtid leucorrhœa had been present for many months, but no blood appeared at any time in the discharge, except on the single occasion which I have mentioned.

Lastly, with reference to the discharges in cancer cases. They differ much in different forms as well as in different stages of the disease. An increased mucous, or muco-purulent discharge, is by no means uncommon in the early stages of medullary cancer, dependent on the general congestion of the womb which, as we have seen, accompanies the disease at its outset. This discharge is not in general offensive, but sometimes patients will complain of an offensive discharge as having been the first symptom of the disorder, and this in cases where it cannot be doubted but that no breach of surface at the time existed. In this, however, there is nothing remarkable; offensive leucorrhœa accompanies uterine congestion and uterine inflammation in many instances, or results in cases of menorrhagia, or of polypus, or of fibrous tumour, from the decomposition of blood which has been poured out; and our patients, at any rate, are not to be expected to discriminate between bad odours from one cause or from another. With the advance of the mischief the discharge becomes almost always unmistakeably offensive, though the variations in this respect are even in the same case not a little remarkable. It has been seen that portions of the diseased structure not infrequently slough off, and are detached from time to time, leaving behind, when they are separated, a comparatively clean surface, and on which for a time a sort of attempt at healthy granulation may even be perceptible. While the

tissues are dying and being renewed the discharge from the cancer will generally be a dirty, highly offensive sanies; after they have been completely thrown off the secretion may be but scanty, puriform, and comparatively inoffensive; while in almost every case, supposing proper precaution to be taken by syringing the vagina and by due attention to cleanliness to remove the secretion completely and frequently, the offensiveness of the discharge will depend in very great measure on the activity with which the processes of sloughing and separation of portions of the cancerous substance are going on. When the disease is in a comparatively indolent state, as it sometimes continues for months before the death of the patient, who sinks in that case under the cancerous cachexia rather than under the advance of the local mischief, the discharge is often neither very profuse nor very offensive. In the indolent state of the disease, too, the secretion has seldom anything of the purulent character which is observable when ulceration and its allied processes are going on actively, but is usually watery, sometimes blood-stained, at other times comparatively transparent. In epithelial cancer, also, the discharge is generally serous, and often almost inodorous, it being rather a secretion from the surface than the result of any decomposition and destruction of tissue. This same absence of any marked offensive odour continues likewise very frequently even after ulceration and destruction of substance have commenced in an epithelial cancer, though, as its characters become merged, as they often do in those of medullary cancer, the discharge almost always acquires a much worse smell than before. In cases approaching to cauliflower excrescence, where the patient dies of hæmorrhage, and also in cases of the so-called corroding ulcer of the os, the discharge continues inoffensive even to the last. These, however, are exceptional cases, and in no way interfere with the correctness of the general rule, that offensive discharge is one of the symptoms of malignant disease scarcely ever absent in some part of its course.

One or two practical inferences may be drawn from what has been stated, which it will be worth while always to bear in mind.

First of all, the presence or absence of offensive discharge must in no measure be allowed to influence us in deciding on the malignancy or non-malignancy of any disease of the womb. Mere irritation of the organ from inflammation or congestion may be associated with it, decomposition of blood within the sexual organs may occasion it, or the decay and disintegration of a fibrous tumour or polypus. On the other hand, the discharge from an epithelial cancer is often for a long time inoffensive, and sometimes continues so throughout, while in other cases the presence or absence of an offensive character in the secretion, may depend upon whether the disease is in an indolent or in an active state. Even in the latter case, if an examination be made just after the dead tissues have been thrown off, it may be found that no bad smell is given out by discharges which but a few weeks before were intolerably offensive.

It would, I apprehend, answer no really useful end were I to endeavour to group together those symptoms which we have hitherto examined, and out of them to form a general portraiture of uterine cancer. The degree in which each symptom is manifested, the order in which the symptoms succeed each other, the time during which they are associated, the increase of one and the diminished urgency of another, all vary so much in different instances that no general description could be applicable in all its details, and I therefore forbear from an attempt which might mislead, and could scarcely instruct you.

Hitherto, however, no mention has been made of the signs of general constitutional disorder which sooner or later manifest themselves in almost every case of cancer, whether of the womb or of other organs, and which add much to the patient's distress. The cancerous cachexia, which is absent only in some few instances of epithelial carcinoma where death takes place from pure loss of blood, is something more than the mere anæmia produced by hæmorrhage, or the exhaustion that follows long-protracted suffering. "The fount of all the blood is touched corruptedly;" food does not nourish, the strength fails, the body wastes, the stomach refuses to perform its proper functions;

nausea distresses the patient, or sickness wears her, and the red, raw, glazed, or aphthous tongue indicates but too clearly the state of the digestive mucous membrane, and explains the urgency of that thirst which drink cannot quench, which it is so often scarcely able even for a few moments to allay. The state of the bowels is frequently an additional source of trouble, constipation alternating with diarrhœa. The former condition is frequently induced in measure by the mechanical obstacle which the enlarged and hardened womb offers by its pressure on the rectum to the passage of the fæces, and is still further maintained by the lack of muscular power in the intestines themselves, which are no longer able by vigorous peristaltic movements to propel their contents. When once diarrhœa comes on, the same want of power allows it to continue till the intestinal canal is completely emptied, while to the same cause may be in large measure attributed the flatulence which often distresses the patient, producing much abdominal pain, and not infrequently issuing in an attack of diarrhœa. The sleep is always disturbed and unrefreshing; opiates indeed may relieve the pain, but they often aggravate the other ailments; the patient feels too ill to sleep, or if she dozes, the parched mouth and burning throat awake her, or else the sense of utter prostration and exhaustion, and the sufferer returns to consciousness with the feeling that but a little more, and the sleep would have ended, as indeed it does not very rarely, in death. In this state I have on five occasions known convulsions to come on, which ended in coma, and in three of the cases the coma ended in death, which took place twice in twenty-four hours, and once at the end of eight days. These head symptoms, however, are not by any means indicative of actual disease of the brain, for two of the patients being examined after death, no trace of mischief was discoverable there; and two others having rallied from the convulsions, lived for many months, while the hemiplegia which in one instance had followed the fits disappeared by degrees, but completely.

But these are exceptional cases, and death is not in general

preceded by any marked cerebral symptoms. The powers of life by degrees wear out, the local mischief often remaining for weeks or months quite stationary, and when at last the patient dies, it may be difficult to say why death came just when it did, why, with disease so far advanced, it did not come sooner, or why, life having lasted so long, it should not have continued still for a few days or a few weeks longer?

The peritoneal inflammation which has been referred to as a not infrequent cause of hypogastric pain, and as producing adhesions between the pelvic viscera, does not seem to have any tendency to assume an active character, and does not materially contribute to shorten the patient's life. The diarrhœa often has this tendency, sometimes assuming a dysenteric character, and being found after death associated with great congestion of the rectum and lower part of the large intestine, and great enlargement of the solitary glands. It is very unusual for great local pain to attend the last few days of the patient's life, and in the very few instances in which I have observed it, it was associated with the development of cancerous disease in the abdomen, and did not appear to be attributable to the affection of the womb.

Two deviations from the ordinary course of cancer must be noticed before we leave the subject of its symptoms. Reference has already been made to the occasional absence of one or other of those symptoms which are usually regarded as characteristic of the disease. But there are also occasional instances in which not merely one customary symptom is absent, but in which all the symptoms are so little marked as to throw the nature of the disease completely into the shade. It is not very unusual for patients to apply for the cure of supposed menorrhagia, in whom examination ascertains the existence of far advanced cancer of the womb; but the most remarkable case of the *latency of all its symptoms* which has come under my own notice is the following:—A woman, aged forty-five, who was following the occupation of a cook, came to me at the Middlesex Hospital, complaining of constipation, and of some uneasiness in defæcation, which she attributed to piles. She had no hæmorrhage,

and no uterine pain, and it was only on closely questioning her that she admitted the existence of slight leucorrhœa. There were no hæmorrhoids, nor was there any disease about the rectum, but the uterus was large, less moveable than natural in the pelvis, its anterior lip hard and nodulated, its posterior destroyed by ulceration. For more than three months she continued to come backwards and forwards to me, and during the whole of this time she retained her place, expressing great relief from simple aperient medicines which I had prescribed for her.*

I do not know her subsequent history, but the practical inference from cases such as these, is that we must take nothing for granted, that a very little warrants suspicion, and I may add, that we must not place implicit reliance on our patients' statements when they deny the existence of some symptom which is either known, or popularly believed to be of evil import. They earnestly desire its absence; they will not allow themselves to believe in the existence of what they so intensely dread.

The other variety of cancer is an *acute form of the disease* which I believe to be very rare, but which runs its course with much febrile disturbance, and with symptoms of an active character such as may be taken by the superficial observer for those of inflammatory mischief. It is a form which I have seen only in young persons, and soon after delivery or miscarriage. In one instance, a woman who had miscarried four months, and had had a single profuse attack of hæmorrhage two months before she came under my notice, was received into the hospital in a state of profuse salivation, in consequence of mercury given her for the cure of alleged uterine inflammation. The disease, of which she soon died, was cancer in a state of far advanced ulceration, but there had been so much febrile disturbance and so much abdominal pain as to throw an intelligent practitioner off his guard, and to lead him to neglect what might seem the very obvious duty of making a vaginal examination. Another case somewhat of the same kind I have also seen, in which the disease ran its course in three months and seventeen days; its

* A case of the kind is related by Dr. Simpson, *op. cit.*, p. 190.

commencement being reckoned from the date of the patient's delivery, previous to which she was not aware of any symptom of uterine disease. In this case the patient died in a state of coma which had succeeded to convulsions, and her state, even at the time of her admission, was one of very great urgency. She, however, had a hot skin, and a furred tongue, and a rapid pulse, with considerable abdominal pain, and I can readily conceive that at its outset these symptoms might, as in the other case, have led into error.

We have already seen that on the one hand the presence of a disposition to cancer does not interfere at all with a woman's fertility, and on the other that the changes that succeed to childbirth seem to favour the advance of the disease. It now remains for us to look at the influence which cancerous disease of the womb exerts on the process of labour itself, when a woman so afflicted has the misfortune to become pregnant. The evidence of statistics bears out fully what one would anticipate to find, and shows that the rugged and thickened os uteri dilates slowly, painfully, and imperfectly; that it is often rent during the parturient efforts, and that formidable hæmorrhage takes place, or dangerous inflammation succeeds; and that sometimes so insurmountable are the obstacles, that the child cannot pass at all, and the mother and her unborn babe either perish together during the parturient efforts, or that gestation is prolonged far beyond its ordinary term, and that death at length takes place without any decided effort having been made by the uterus to expel its contents.*

* As in Dr. Menzies' very remarkable case recorded in *Glasgow Medical Journal*, vol. i. p. 129, July, 1853.

Table showing the Result of Seventy-four Cases of Cancer of the Neck of the Womb complicating Labour.

Authority.	Total Cases.	Died in or very soon after Labour.	Recovered from the effects of Labour.
* Puchelt . . .	31	18	13
† Oldham . . .	5	2	3
‡ Cormack . . .	1	...	1
§ Simpson . . .	6	2	4
|| Arnott . . .	2	...	2
¶ Scanzoni . . .	4	4	...
** Dorrington . .	1	1	...
†† Kiwisch . . .	4	4	...
‡‡ Menzies . . .	20	10	10
	74	41	33

In Seventy-one Cases the Fate of the Children is mentioned.

Authority.	Total Cases.	Dead.	Born Alive.
Puchelt . . .	30	19	11
Oldham . . .	5	4	1
Cormack . . .	1	...	1
Simpson . . .	6	2	4
Arnott . . .	2	2 twius	1
Scanzoni . . .	4	4	...
Dorrington . .	1	1	...
Kiwisch . . .	4	4	...
Menzies . . .	18	11	7
	71	47	25

Hereafter we must return to the subject, in order to inquire into the means which will give us the greatest chance of carrying the mother and her child safely through these dangers. For the present, it is enough to have adverted to them, and to have shown their nature and extent.

When speaking of the various diseases of the womb—of inflammation with hypertrophy and induration of the cervix, of polypus, and fibrous tumour—I called your attention to the

* *De Tumoribus in Pelvi*, &c , 8vo, 1840, cap. iii. and iv.

† *London Journal of Medicine*, 1851, p. 204, and *Guy's Hospital Reports*, 2nd series, vol. vii. p. 427.

‡ *Op. cit.*, p. 648.

¶ *Med. Chir. Trans.*, vol. xxxi. p. 37.

|| *Lehrbuch der Geburtshülfe*, vol. ii. p. 258.

** *Prov. Med. Journal*, Oct. 7, 14, 21, 1843.

†† *Op. cit.*, vol. i. p. 540.

‡‡ Menzies, *loc. cit.* In Menzies' table of 27 cases are included those of Denman, contained in Puchelt's table, and some cases of Oldham and Simpson, which are separately referred to by me. Those being omitted, 20 cases remain.

main points of distinction between them and cancer of the womb, and will not therefore occupy your time by reiterating cautions and directions which I gave you then.

There is therefore but one point more to notice in order to complete our history of cancer of the womb, and that refers to its duration, which seems indeed to be shorter instead of longer than that of many other forms of the same disease.

In seventeen instances I was able to fix accurately the duration of uterine cancer, and found that it was:—

Under 4 months	. . . .	in 1 case
„ 5	„	„ 2 „
„ 9	„	„ 1 „
„ 12	„	„ 3 „
Exactly 1 year	. . . .	„ 2 „
Between 1 and 2 years	. . . .	„ 4 „
„ 2 — $2\frac{1}{2}$	„	„ 2 „
„ $2\frac{1}{2}$ — 3	„	„ 1 „
Exactly $3\frac{1}{4}$	„	„ 1 „
<hr/>		
17		

Average duration, 15 months.

The average of thirty-nine cases, as given by Lebert,* is sixteen months and a fraction, a result very nearly approaching to my own, and less than the average duration of all forms of cancer, which is stated by the same authority at eighteen months, the progress of the disease being slower in the mammary gland, the testis in the male, the eye, the bones, the lymphatics, and the intestinal canal; though even in the breast and the testis, in which its advance is most tardy, the average duration of the disease does not exceed three years and a half.†

In the next Lecture we shall pass to the investigation—I wish we could do it with brighter prospects—of the remedial means, whether medical or surgical, by which we may hope to retard the course, to alleviate the sufferings of cancer, sometimes to obtain for the patient a brief respite, now and then perhaps, to accomplish her cure.

* *Op. cit.*, p. 270.

† *Ibid.*, p. 122.

LECTURE XX.

MALIGNANT OR CANCEROUS DISEASES OF THE UTERUS.

TREATMENT ; various opinions entertained at different times concerning it.

PALLIATIVE TREATMENT of the hæmorrhages ; of the pain ; of the discharges ; management of the general health, and of symptoms of cancerous cachexia. Pregnancy and labour complicated with cancer ; question of induction of premature labour ; management of the labour itself.

CURATIVE TREATMENT ; extirpation of the whole uterus ; results of the operation, and reasons for rejecting it. Excision of the neck of the womb ; errors which brought it into discredit ; cases suited for it ; modes of performing the operation ; dangers ; that of hæmorrhage the chief. Comparative advantages of ligature and excision considered.

Other means supposed to be remedial ; employment of cold, of caustics, and of the actual cautery ; observations on each.

VERY numerous have been the fluctuations of opinion with reference to the management of cancer of the womb. When knowledge concerning it was most imperfect, alleged remedies abounded, and various medicines had the reputation of eliminating the cancer poison from the system, and, acting thus through the medium of the constitution, of removing the local disease. Next came a period of adventurous surgery, of attempts to root out the whole evil, over which it became evident that internal means had but little influence. Soon, however, practitioners were affrighted at the difficulties and the dangers of such operations, and then resorted to a combination of local and general treatment, and believing that between cancer and inflammatory induration there was some close bond of affinity, they endeavoured by depletion, and by other means calculated to retard the changes which inflammation produces, to keep at bay the advances of cancer. An attempt was made, too, to vindicate

to surgery its share in the removal of this disease, even when medicine was of no avail, and for a time the amputation of the scirrhus neck of the womb was vaunted as a mode of almost infallibly arresting the otherwise inevitable danger. Time and increased knowledge, however, have led us to unlearn much in which our predecessors had an unfaltering faith. We have renounced all credence in the specific remedies once believed in; we have abandoned, as too hazardous to be warrantable, the extirpation of the whole uterus, we have found out that there is no relation between inflammation and cancer, that antiphlogistic means which remove the effects of the former, have yet no power to control the progress of the latter; and, moreover, that the supposed triumphs of surgery in cutting short the disease, by removing that small part of the organ whence, if let alone, it might have spread to surrounding tissues and neighbouring viscera, were, for the most part, purely imaginary; and the trophies once displayed in our museums are now generally put out of sight, as the mementoes of a pathological blunder and a needless operation.

It seems then that, in the greater number of instances, our duty in the *treatment of uterine cancer*, is the very humble one of mitigating sufferings which we cannot remove; of depriving death of some of its terrors, though we may feel ourselves powerless to delay its steps. Carefully to study, religiously to carry out this duty, calls for much care, for much and most untiring patience. But there are some few cases concerning which we must admit the possibility of a better issue being attainable, and we shall advance all the more steadily in our quest of means of cure, now that we have learnt with greater certainty than before to distinguish the different varieties of the disease; to know the cases in which recovery may be possible, from those in which we shall assuredly err if we aim to do more than palliate the more urgent symptoms.

I propose, therefore, first to pass in review the different means by which we can minister present relief to the patient labouring under cancer of the womb; and then to consider the

exceptional cases in which we may attempt something more, and the merits of the various proceedings by which a radical cure of the disease has been attempted, has sometimes even been achieved.

In cases of cancer generally, our attention is divided between the relief of the local symptoms, and the maintenance, as far as possible, of the general health. I know of no means by which the progress of cancer can be arrested in its first stage, and the disease kept stationary; a source, indeed, of constant apprehension, but the occasion of little present discomfort, and of no immediate danger. Almost all the vegetable, almost all the mineral poisons have been tried, extolled, and rejected in turn; tonics have been administered, and again the patient has been placed under the so-called hunger cure, that is to say, her food has been reduced to the smallest quantity on which life can be maintained; and this, with the result which the empirical trial of remedies almost always merits, almost always attains.

The *hæmorrhage* is usually the first symptom which so excites the patient's alarm as to induce her to seek for medical aid. But unfortunately, ere then the disease has often made considerable advances, and its nature is already but too evident. The hæmorrhage at the outset of the disease being, as already explained, due to congestion of the womb, our first endeavour must be by every means to abate it, and thus to prevent, if possible, the return of the bleeding. It is self-evident, that with this object in view, every direct excitement of the sexual organs must be injurious, and hence there can be no exception to the rule which interdicts marital intercourse whenever there is the least suspicion of cancerous disease. The state of the bowels is the next point to attend to, and they must be kept freely open, if possible, by mild saline aperients, which unload the hæmorrhoidal vessels, as well as prevent the accumulation of fæces in the intestinal canal. A mild, unstimulating diet is equally important, and I have no doubt but that in the early stage of cancer an opposite plan is injurious to the patient's general health, and

indirectly accelerates the advance of the disease. When to these precautions are added the avoidance of all active exertion, and the most absolute rest at the return of each menstrual period, I fear there is little more within our power. The local employment of depletion, which has been recommended in the early stages of cancer, is very rarely admissible, and I am not disposed to advise that the blood should ever be drawn from the uterus itself, but rather from the hypogastrium or the groin, since I have known very serious difficulty occur in arresting the bleeding from leeches applied to the neck of the womb in these cases.

At a later period of the disease, the hæmorrhage may be so profuse as to call for direct restraint, and the necessity for immediately checking it is of course urgent in proportion to the degree of anæmia which already exists. The gallic acid is of all astringents that which has least often failed me, but in order to obtain decided effects from it, it should be given in doses of six or eight grains every four hours. The infusion of matico, as a local application, is also of much use in some of these cases, but the management of the injection can never be safely entrusted to the patient, who either employs it ineffectually, or else causes herself much suffering by striking the neck of the womb in her endeavours to introduce the instrument far enough into the vagina. There are obvious difficulties in the way of plugging the vagina in cases of ulcerated carcinoma; and, indeed, the mode in which the profuse bleedings usually take place, by sudden outbursts of hæmorrhage, followed by a long pause, is that against which such a proceeding is least of all calculated to guard. In some cases of soft medullary cancer, or of epithelial cancer, when the continuance of hæmorrhage becomes a very serious source of danger to the patient, we may break down the tissue with the finger, and then inject into the midst of it the tincture of the sesquichloride of iron. The bleeding vessels are thus destroyed, and the coagulation of the extravasated blood by the chemical agent prevents the occurrence of any further hæmorrhage, while the whole mass which has been thus treated sloughs away

in the course of a few days, leaving behind a healthier surface, or one at any rate less disposed to bleed. This proceeding, which was to the best of my belief first recommended by Kiwisch,* is not accompanied by much pain, nor has it in my experience ever been followed by serious constitutional disturbance, while the improvement which for a time succeeds the checking of the previous drain upon the system is often very remarkable.† Kiwisch also speaks of the employment of the actual cautery as a very efficacious means of restraining bleeding, in cases where the surface is of too firm a texture to be broken down. I have not tried the actual cautery specially for this purpose, though I believe that in some cases of uterine cancer I have obtained by it much temporary improvement both in the general health of the patient and in the condition of the ulcerated surface. Of this, however, more hereafter.

The *pain* is, of all the symptoms, that from which the patient most earnestly prays for relief, while, unfortunately, we are often but little able to afford it. There is a permanent pain, or at least a permanent sense of discomfort, which most women experience, and besides, there are occasional paroxysms of severe suffering from which some are fortunately exempt. The back-ache, the pain in micturition, and the distress in defæcation, are usually to be relieved rather by attention to the functions of the bladder, and the state of the bowels, than by direct anodynes. The Vichy water as a drink, the extract and decoction of uva ursi, with small doses of liquor potassæ and tincture of henbane, often give much relief to the irritable bladder which troubles the patient in the early stages of cancer, while, at a later period,

* *Op. cit.*, vol. i. p. 547.

† In the *Lancet* for December 29, 1855, is a very remarkable case related by Dr. Boulton, of Horncastle, in which the breaking down of the tissue of a large epithelial cancer of the cervix uteri, and the arrest of the subsequent bleeding by caustics, of which the muriated tincture of iron appears to have answered best, has been persevered in for five years, not only with great improvement in the patient's condition, but as would seem, with the final result of completely destroying the disease, of which for sixteen months previous to his communication the os uteri had presented no trace.

when organic mischief has commenced there, and the urine is loaded with phosphates, small doses of hydrochloric acid, with the extract and decoction of pareira, will in their turn be of service. The establishing a habit of regular action of the bowels will save the patient from many of the distressing bearing down sensations from which she had previously suffered. Mild laxatives, such as the confection of senna, or very small doses of castor oil, are generally best for this purpose; enemata are not in general expedient, for their administration is often very painful owing to the presence of hæmorrhoids, while the pressure of the distended rectum against the womb sometimes brings on very severe suffering. Plasters of belladonna, or opium, applied to the back or above the pubes, sometimes relieve the permanent pain in those situations, while any casual aggravation of it is often mitigated by the local application of chloroform, or of cotton wool soaked in a liniment of equal parts of chloroform and oil, and covered over with oiled silk to prevent evaporation.

The longer the patient can dispense with the habitual employment of anodynes, the better is it for her general health. In time, however, they are sure to become necessary, and the need for them is usually first experienced at night, for almost always at that time the pain becomes more severe than it had been during the day. Whether employed at night, however, or given more frequently, it is always desirable to begin with the mildest form of narcotic, and to pass only by degrees, and as each in turn ceases to be efficacious, to those which are more potent, and to the preparations of opium. I usually begin with camphor and henbane in the form of pill, giving five grains of each at bed-time, and usually I find henbane a more certain and more efficient medicine than hemlock. If the anodyne begins to lose its power, it is not always necessary at once to increase its strength, but the same dose will often continue to act if it be combined with a draught containing ether, or some other diffusible stimulant. Twenty minims of the compound spirits of ether, and fifteen of the chloric ether, will often, when added to the anodyne, lull the pain which had previously been

importunate, or procure the rest which the patient had before been unable to obtain. The same fact holds good through the whole course of the disease, even at a time when opiates in large and frequently repeated doses have become absolutely necessary. After henbane, I generally make trial of the Indian hemp, for though it is an uncertain medicine, and one the effect of which seems to be much modified by the idiosyncrasies of the patient, it does not in general either constipate or produce headache, or disorder the digestion to so great an extent as opium. Belladonna does not constipate, but it occasions headache, and if given in doses sufficiently large to control the pain of cancer, it is sometimes followed by an alarming degree of depression. We come then to opium and its different preparations, and of all of these the tincture is generally borne for the longest time, and with the greatest relief. There are peculiarities in different cases, however, which lead us sometimes to prefer one form and sometimes another of this remedy. The black drop, I think, causes on the whole less sickness than the other preparations of opium, morphia not excepted, while, in spite of the many recommendations of the latter medicine, we are sometimes compelled to abstain from giving it, in consequence of the extent to which it aggravates the irritability of the skin, and the disposition to urticaria, which are not very unusual attendants upon uterine cancer. I have not found any such advantages from the employment of opiate suppositories or of opiate enemata as to induce me to prefer that mode of giving opium to its administration by the mouth ; and I may further add, that the local employment of the vapour of chloroform by means of Dr. Hardy's very ingenious contrivance, has hardly ever proved sufficiently powerful to give much relief to the patient.

The idea of employing the inhalation of chloroform to relieve the violent paroxysms of uterine pain, naturally suggests itself to our minds. It is not, however, of as much service practically as might have been anticipated. Sometimes the pain is of such intensity that chloroform scarcely mitigates it ; not infrequently sickness and vomiting come on before the patient is fully under

its influence ; while in a large number of cases so much depression follows its use, and such long-continued irritability of the stomach, that the patient herself is unwilling to purchase at so dear a rate a very short, and sometimes very imperfect immunity from suffering. Still it is one of the means which we may try, and in some few cases it is well borne, and gives much temporary relief.

The *discharges* which occur in the course of uterine cancer call for medical interference, either to restrain their excess, or to correct the offensive odour that attends them. In the absence of these indications, no interference is desirable beyond such as mere attention to cleanliness dictates, and for which tepid water is preferable to any kind of medicated injection. Direct astringents, such as the matico or tannin, or the decoction of oak bark, are useful in restraining the profuse serous discharges which occur in some cases of epithelial cancer, and, are I think, generally preferable for this purpose to lotions of lead, or zinc, or alum, which more frequently produce pain, while they are of less efficacy in checking the superabundant secretion. Sometimes the discharge, though of a mucous or muco-purulent character, is extremely profuse, and this is often diminished, and the condition of the ulcerated surface secreting it is improved by a very weak acid lotion, such as ℥j of dilute nitric acid to Oj of water ; while more decided astringents will either fail altogether of the intended effect, or will produce an increase of pain. Sometimes, however, an abundant secretion from an irritable ulcerated surface is checked, and the sensibility of the part diminished by the use of an injection of ℥j of sulphate of iron and ℥iij of extract of conium to a pint of water. Now and then the extreme sensitiveness of the ulcerated surface is diminished by a lotion of ℥ss of opium to a pint of lead-wash, but as a general rule, the local application of anodynes to the diseased surface is by no means efficacious ; and much more relief is afforded by agents of greater power, and which tend directly to alter the state of the part. In this way great relief is sometimes given by strong solutions of caustic, which at the same time are a most

powerful means of destroying the horribly offensive odour that attends upon the sloughing and detachment of portions of cancerous outgrowth. A solution of \mathfrak{Dj} to \mathfrak{Zss} of nitrate of silver in \mathfrak{Zj} of water injected immediately into the diseased tissue, has the effect both of destroying the bad odour, and also of hastening the separation of the slough. The employment of this daily for one or two days generally suffices, but at the same time a weak solution of chloride of lime, such as would be formed by \mathfrak{Zij} of the solution to \mathfrak{Oj} of water, may be used several times a day with the effect both of diminishing the foetor, and of improving the condition of the ulcerated surface. In far-advanced carcinoma these remedies may cease either to be useful or to be admissible, but then the creasote lotion, made with \mathfrak{Zj} of creasote to \mathfrak{Oj} of some mucilaginous fluid, will have a remarkable influence in removing the offensive smell which adds so much to the distress of the patient and of those about her. When the bladder or rectum has been injured by the advance of the disease, we are unfortunately reduced to mere ablution, and the use of lotions of tepid water. When this accident does not happen, it fortunately occurs, as has already been mentioned, that the disease of the womb often remains stationary for months together, and that the patient is spared at the close of life many of the painful local symptoms which distressed her during the earlier period of her disease.

And this brings me last of all to consider the management of the *cancerous cachexia*; of those symptoms of general constitutional disorder, which springing from an irremediable cause, are sure at length to baffle our skill. Most, and the most distressing, of the patient's symptoms, are referrible to the state of her digestive functions. She not only loses strength with the loss of blood, but digestion itself becomes generally impaired. In some cases, indeed, as in those of epithelial cancer, in which the most prominent symptoms are those of mere anæmia, iron is often well borne, and is then of much service. I usually employ the ammonio-citrate of iron in five-grain doses, three times a day, giving it in some effervescing medicine, such as the citrate of

ammonia. The stronger chalybeate preparations, or large doses of the milder, often disagree, producing headache and feverishness. The failing appetite is sometimes for a time restored by the preparations of bark ; but rather by the infusion or by small doses of the liquor cinchonæ in combination with acids, than by quinine, which in many instances is not borne. A combination that often suits is the nitro-muriatic acid in the infusion of cloves or of orange-peel ; while throughout the whole treatment of the disease, our remedies must be not only gentle in kind, but must be given in small doses.

In most cases, the stomach after a time grows irritable, and the tongue becomes raw and red, and aphthous. The irritability of the stomach is relieved by all food and drink being taken cold, by sucking small morsels of ice, by very small quantities of effervescing drinks, or of effervescing wines, such as Champagne or the sparkling Moselle. Sometimes, too, a mustard poultice or a slight vesication over the epigastrium will give relief, or even the application of a piece of lint soaked in the acetum opii. The hydrocyanic acid may be tried, and sometimes it gives relief, but its benefits are usually more marked when combined with ether than when given alone. The sense of sickness and faintness, unaccompanied by actual vomiting, which often becomes very distressing as the disease advances, is in many instances relieved by sal volatile, in doses of forty to sixty drops, or by the compound tincture of ammonia.*

The soreness of the mouth, however, sometimes precludes the administration of stimulants, and even renders the taking food a source of extreme suffering. This state is often much relieved by the chlorate of potash, of which a quarter to half an ounce may be taken in the course of the day, in a pint of barley-water flavoured with a little orange or lemon peel ; but the unpleasant soapy taste which it leaves behind, often disgusts the patient, and compels us to discontinue its use. In some of these cases the soreness of the mouth and the dry burning sensation in

* See Formula No. 8, p. 78.

the throat are relieved by a spermaceti draught,* which also furnishes a convenient vehicle for opiate preparations in cases where diarrhoea is present. The diarrhoea is usually a temporary symptom only, and yields for the most part to aromatics and opiates tolerably readily, though when it occurs at a very advanced stage of the disease, and when the vital powers are much weakened, it sometimes carries off the patient. The disposition to constipation is a much more frequent source of distress ; and it is of great moment not to allow the bowels to remain many days without being acted on. From neglect of this precaution, I once knew constipation to continue for eighteen days, when the patient died with an enormously distended abdomen, and ill-marked symptoms of peritonitis. There was no mechanical obstacle to the passage of the fæces, but they had been allowed to accumulate till the feeble muscular power of the intestines was insufficient to propel their contents ; medicine irritated the stomach, and caused vomiting, without producing any action of the bowels, and peritoneal inflammation at length came on, just as it does in a case of strangulation of the intestines.

I know no other ordinary incident in the course of uterine cancer which calls for special notice now ; but I would have you bear in mind that when there has long been no hope of cure, it is yet often within our power to minister very largely indeed to the comfort of the patient, to soothe distress, and mitigate suffering which otherwise would be utterly intolerable.

Reference was made in the last Lecture to the dangers which attend on pregnancy and *labour* when associated *with cancerous disease of the neck of the womb*. In not a few instances of this complication, abortion or premature labour occurs, owing to the disease not allowing of those changes which with advancing pregnancy ought to take place in the lower segment of the uterus. In such circumstances greater suffering, and more con-

* (No. 10.)

R Cetacei

Pulveris Tragacanthæ, aa . . . ʒj

Syrupi Papaveris albi . . . ʒj

Aquæ destillatæ ʒxi—M. ft. Haustus.

siderable hæmorrhage than ordinary, usually attend the miscarriage. I have indeed known the loss of blood to be so considerable as to occasion the patient's death in a few days; while though she should survive this danger, and the subsequent risk of peritoneal inflammation, the cancerous disease generally advances more rapidly than before. Still the dangers which attend upon the miscarriage are not to be put in comparison with those that accompany labour at or near the full period of pregnancy. In some instances labour pains have come on, but the os uteri not yielding, the contractions of the organ have again subsided, and the patient has at length died painfully after gestation protracted for months beyond the full period. More commonly, either the womb gives way during the labour, or the violence inflicted on it during the passage of the fœtus or its instrumental extraction, proves immediately, or speedily fatal; and on this account it is laid down as a general rule that abortion or premature labour should be induced in cases of this description. The rule is doubtless a sound one, though something of its applicability must depend on the extent of the disease, and the stage of pregnancy at the time of the patient coming under our observation. If the mischief should appear to be already so far advanced as to preclude any reasonable expectation of life being prolonged by medical or surgical treatment, while at the same time there does not seem to be any insuperable obstacle to the passage of the child, it would be the better plan to allow pregnancy to go on without interruption; inasmuch as while the life of the child might be thereby preserved, the mother herself would be more likely to retain comparatively good health during the remainder of gestation, and the disease to make less rapid progress than during an equal space of time after the womb had been emptied of its contents. In some instances, too, the disease is found to be so extensive as to offer an apparently insurmountable obstacle to the rupture of the membranes, or to any other mode of bringing on miscarriage, and here the great immediate peril of interference must be allowed to counterbalance the remoter risks of delay.

When labour actually comes on, it is often the case that free incisions into the os uteri and the cervical canal are the only means by which such a dilatation of the passages can be obtained as will allow of the birth of the child. Still it is important not to be premature even in these cases in resorting to operative interference. I remember, years ago, when a student in Paris, a patient was received into the Clinique des Accouchemens in an advanced stage of pregnancy, and suffering at the same time from extensive cancerous disease of the womb. Professor Dubois mentioned her case to the class, and spoke with considerable certainty of the necessity for incising the neck of the womb when labour should come on. Contrary to all expectation, however, the os uteri dilated readily to admit of the passage of the child, and the labour was but of a few hours' duration. That which happened in this case, I myself observed in another instance, where the comparatively small part of the lower segment of the womb which was not implicated in the disease, stretched beyond what might have been supposed possible, and in spite of the unyielding condition of the bulk of the cervix, thus made room for the passage of the child. But so soon as labour has advanced far enough for us to be really satisfied of the necessity for interference, and to determine the direction in which incisions should be made, and the extent to which they should be carried, any further delay would add to the patient's danger, without any corresponding advantage.

The question has been raised, whether in cases where the disease is very extensive, and the impediments to the passage of the child, or to the employment of instruments for its extraction very great, it might not be less hazardous to remove the child by the Cæsarean operation? Dr. Oldham,* however, is, to the best of my knowledge, the only person who has carried out the idea in practice; and the favourable result of his case, as far as the issue of the labour was concerned, proves the wisdom of the choice which he made. Desperate, however, must be the state

* *Guy's Hospital Reports*, 1851, second series, vol. xi. p. 426.

of a patient, when of two alternatives the Cæsarean section is the less hazardous.

And now, having considered the indications which, in the great majority of cases of uterine cancer we may have to fulfil, and the best mode of accomplishing them, we come, in conclusion, to the examination of different proceedings that have been recommended either for the extirpation of the diseased organ, or for the removal of the diseased portion of it, or for retarding by various local measures the rapid progress of the evil.

First among these proceedings we must consider the *removal of the whole uterus*, though in spite of one or two temporary successes which have followed its performance, the unanimous voice of the profession has pronounced it to be overbold, and has rejected it from among the legitimate operations of surgery.

The only instance with which I am acquainted of permanent recovery after the complete extirpation of the cancerous uterus, is that in which the elder Langenbeck removed the long procident organ from a woman, who lived free from disease for twenty-six years afterwards.* In the first place, however, it is by no means certain that the induration and ulceration were due to anything else than the irritation of the organ from long exposure to external injury, and even though it were, you will yet remember that the sensibilities of the womb become so lessened by long residence out of the pelvis, that no inference can be drawn as to the danger of operations on the organ when *in situ* from the results obtained when it has been long procident. So favourable a conjuncture as that met with in Langenbeck's case, and which, no doubt, much facilitated the difficult task of shelling out the organ from its peritoneal investment, must be of extreme rarity, and few, indeed, are the instances in which it has existed.†

* The particulars of which are detailed, and drawings showing the appearances after death are given, together with much important information concerning the operation, by the present Professor Langenbeck, in his inaugural dissertation *De totius uteri extirpatione*, 4to, Gottingæ, 1842.

† A case is on record of the successful extirpation of the uterus, said to be cancerous, by means of the ligature and knife, performed in the year 1783, by M. Marschall, of Strasburg, and reported in *Salzb. Med. Zeitung*, 1794, vol. i. p. 136

Attempts have been made artificially to produce a state of prolapse of the womb, and thus to approximate the conditions of the operation to those which existed in Langenbeck's case, but with little success; while some have removed the organ through the vagina without any attempt at altering its position, and once the abdominal cavity was laid open, and the womb removed through the incision. I need not enter into a long critique of these different proceedings, when I have told you that of 25 cases, 22 terminated fatally in consequence of the operation, and that two months, four months, and a year, were the respective periods during which the patients survived in what are termed the successful cases.*

and another recently, by Bellini, in *Omodei Annali Universali*, for 1828, vol. xlvii. p. 355. In the latter case, however, the removal of the uterus was only partial. Paletta's case, in which the patient died on the third day, reported in *Omodei Annali*, 1822, vol. xxiv. p. 43, cannot with propriety be included among these cases, inasmuch as the removal of the uterus was unintentional, and the disease seems to have been rather a large fibrous tumour dragging the uterus beyond the external parts, than any form of cancerous affection. Récamier removed the proident cancerous uterus by ligature, *Archives de Méd.*, vol. xxx. The patient recovered, but died of dysentery in three months.

* The subjoined table gives, I believe, a tolerably accurate account of all recorded cases of total extirpation of the uterus on account of cancerous disease.

SUCCESSFUL CASES.

Operator.	Reference.	Period during which Patients Survived.
Récamier .	{ <i>Recherches sur le Traitement du Cancer</i> , 1829, vol. i. p. 519 }	2 months
Sauter . .	{ <i>Die gänzliche Extirpation d. Carc. Gebärmutter</i> , 1822 }	4 months
Blundell .	{ <i>Lancet</i> , Oct. 1828, <i>Med. Gazette</i> , vol. ii. p. 294, and vol. iii. p. 797, and MS. note at commencement of his <i>Researches</i> , &c., in Royal College of Surgeons . . }	1 year all but a few days

UNSUCCESSFUL CASES.

Operator.	Reference.	Date of Death after Operation.	Alleged Cause of Death.
Blundell .	<i>Lancet</i> , Nov. 22, 1828, vol. xv. p. 255	2½ hours	Shock
"	<i>Ibid.</i>	9 hours	"
"	<i>Ibid.</i>	39 "	"
Langenbeck	Langenbeck, jun., <i>Dissertation</i> , p. 52	24 "	Peritonitis
"	<i>Ibid.</i> p. 55	2 days	"

Of the 22 fatal cases, four terminated within six hours, and 4 more in twenty-four hours, 7 in two days, 2 in three days, 2 in four days, 1 in a few days, 1 in ten days, and in 1 the duration of life is not stated, though the patient is said to have died from the effects of the operation.

In 21 cases the cause of death is stated, and appears to have been the pain or shock of the operation in 8 instances, hæmorrhage in 3, hæmorrhage and shock in 2, peritonitis in 6, peritonitis and shock in 1, and a so-called nervous fever in another instance.

But while facts such as these amply justify the general verdict of the profession, as to the impropriety of attempting the complete extirpation of the cancerous womb, no such general verdict of condemnation can be passed on that less hazardous operation which aims at the cure of the disease in an earlier stage by the

UNSUCCESSFUL CASES—(continued).

Operator.	Reference.	Date of Death after Operation.	Alleged Cause of Death.
Langenbeck	Langenbeck, jun., <i>Dissertation</i> , p. 58	10 days	Nervous Fever
Holscher .	{ <i>Graefe u. Walther's Journal</i> , vol. vi. p. 638 }	24 hours	Shock
Wolff . .	<i>Ibid.</i> vol. vii. p. 478	2 days	Peritonitis
Siebold .	<i>Journal f. Geburtshülfe</i> , vol. iv. p. 507	65 hours	"
"	<i>Ibid.</i> vol. vii. p. 600	2 days	"
Banner . .	<i>Lancet</i> , Oct. 11, 1828, vol. xv. p. 57	4 "	"
Lizars . .	<i>Ibid.</i> Nov. 29, 1828, vol. xv. p. 269	32 hours	{ Hæmorrhage and Shock
Roux . .	{ <i>Archives Gén. de Médecine</i> , Oct., } 1829, p. 238 }	33 "	Shock
"	<i>Ibid.</i> p. 241	24 "	{ Hæmorrhage, Pain, Shock
Récamier .	<i>Journal Hebdom.</i> , vol. vi. p. 120 .	2 days	Hæmorrhage
Dubled . .	<i>Ibid.</i> vol. viii., p. 123	22 hours	"
Dieffenbach	<i>Operative Chirurgie</i> , vol. ii. p. 800	4 days	{ Shock, Peritonitis
Delpech .	{ Boivin et Dugés, <i>Maladies de l'Uterus</i> , vol. ii. p. 35 . . . }	3 "	Pain, Shock
v. Walther	{ Kilian's <i>Operationslehre</i> , &c., vol. iii. 2nd ed. p. 261, note }	Immediate	"
Warren . .	{ <i>Am. Journal of Med. Sciences</i> , 1829, vol. iv. p. 536 . . . }	3rd day	Hæmorrhage
Bodenstab .	{ <i>Neue Zeitschrift f. Geburtskunde</i> , vol. xviii. p. 232 }	Immediate	Shock
Fabri . .	{ <i>Froriep's Notizen</i> , vol. xii. No. 20, p. 319 }		Not stated

removal of the affected part. Not to lose ourselves in fruitless antiquarian investigations, we may date the introduction of the *amputation of the cancerous neck of the womb* among the operations of surgery from the year 1802, when it was successfully performed by the late Professor Osiander, of Göttingen. Between that time and the year 1816, Osiander amputated the neck of the womb in twenty-three instances,* and so striking an innovation as this proceeding not unnaturally excited much attention in Germany. The operation did not, however, meet with much encouragement among Osiander's countrymen, for the sometimes formidable and, in some instances, fatal hæmorrhage which often succeeded it, not unnaturally deterred many from attempting it, while it was further alleged that even in its originator's hands the operation failed more frequently than it proved successful. There were also personal defects of character which always stimulated into activity numerous hostile critics of all of Osiander's doings and sayings ; and hence, until quite recently, the cases were very few indeed, in which the amputation of the neck of the womb was had recourse to in Germany. In France, however, where no such causes were in action, the operation met with numerous advocates, and it received the sanction of Dupuytren, who performed it on several occasions. The remarkable results obtained by M. Lisfranc, who alleged that he had performed the operation ninety-nine times, and in eighty-four instances with lasting success, obtained for a time great notoriety, both for the proceeding itself, and for the surgeon who had constituted himself its most clamorous champion. Before long, however, doubts but too well founded, were thrown on the accuracy of Lisfranc's statements, and his former pupil, M. Pauly, published a book in which he asserted, and his assertions have never been disproved,† that M. Lisfranc overstated the number

* So stated in Langenbeck, *op. cit.*, p. 26, note 5, from sources there indicated.

† Those who wish to pursue the particulars of this quarrel, not creditable to either party, but least so to Lisfranc, will find the materials in Pauly, *Maladies de l'Uterus*, 8vo, Paris, 1836, pp. 427—481 ; and Lisfranc, *Clinique Chirurgicale*, 8vo, Paris, 1843, vol. iii. pp. 633—657. Lisfranc's feeble defence amounts almost to a plea of guilty on his part.

of the operations he had performed, and falsified their results ; while further, in many of the cases in which he had removed the cervix, the disease was not cancer at all, but mere induration of the neck of the womb.

Though not altogether abandoned, yet both in France and in this country, where it had been occasionally performed, this operation fell into comparative disuse, till it was recently revived with better knowledge of the subject, and a juster appreciation both of the cases which are suited for it and of those for which it is not fitted.

There can be no doubt but that formerly in many instances in which the neck of the womb was amputated, no cancerous disease existed, and I have myself seen the cervix uteri excised, and the patient exposed to the present risk of hæmorrhage and to the subsequent dangers of uterine inflammation, for the removal of mere induration of the organ. On the other hand, the excision of the neck of the womb was not infrequently had recourse to in cases of fungoid carcinoma of the organ ; a form of disease which, beginning in the substance of the part, has already made extensive progress when it reaches to the surface, and does not in general give rise to any obvious symptoms of its presence, till it has already advanced so far that any attempt at the extirpation of the part must be worse than useless.

Such were the two opposite errors by which this operation was brought into discredit ; by the one it was performed when needless, by the other when useless. I have, however, described a variety of malignant disease to which it is applicable, and in which its performance has been found to be most salutary. Cases have long been on record in which the complete removal of cauliflower excrescence of the uterus has been followed by the patient's complete recovery, and you know that there are other forms of disease of more solid texture, and endowed with smaller vascularity, which present the same character of beginning on the surface of the os uteri, and only by degrees extending to deeper tissues. Now precisely these epithelial cancers of the uterus are they which have been cured by the removal of the

affected part, and to such cases I believe the operation ought to be almost exclusively limited. It is to be feared, however, that the conditions which even in this form of the disease warrant the performance of the operation, are comparatively seldom to be met with, for though for the past ten years I have been constantly looking out for cases suitable for it, but one instance has come under my observation in which my surgical colleagues have considered it justifiable, and not above two or three more in which, in my own opinion, it might have been attempted. The patient whose cervix uteri was removed, was operated on by Mr. Arnott in the Middlesex Hospital. There existed in her case perfect mobility of the uterus, so that but little difficulty was experienced in drawing the organ down beyond the external parts; while the neck of the womb was of sufficient length, and seemed sufficiently unaltered at its upper part, to warrant the expectation that the incision might be carried through healthy tissues, and that the disease might be completely eradicated. The hæmorrhage in this case was very formidable, a large arterial trunk pouring out blood in great abundance, and this was restrained only by the employment of the actual cautery, while on the separation of the slough, a second outburst of hæmorrhage rendered it necessary to plug the vagina. These dangers surmounted, the patient's subsequent recovery was very rapid; she regained flesh and strength, and for nearly six months continued in the enjoyment of perfect health. Symptoms of her disease then re-appeared, and she died in the course of two months, eight months after the performance of the operation. Even six months of life, of hope, of freedom from pain, of health and happiness, cannot, however, be thought dearly purchased by an operation which, even without the aid of chloroform, is by no means very painful, and whose one great danger, that of hæmorrhage, can generally be controlled, if not averted, by the use of the plug.

The operation has been performed in two ways; either by drawing the uterus down with hooks so as to bring the diseased part beyond the vulva, just as in the excision of polypi; or

without displacing the organ, by simply cutting through the cervix, either with or without the previous introduction of the speculum, with a curved bistouri, a pair of scissors, or an instrument specially contrived for the purpose, of which the most ingenious is Colombat's hysterotome.* It is very doubtful, indeed, whether any speculum could embrace the really cancerous cervix, and yet leave room for the dexterous manipulation of a bistouri or a pair of scissors. All complex instruments, such as Colombat's, are found in practice to be open to objections which their inventor never anticipated, and in spite of the obvious advantages of meddling no more than is absolutely necessary, I should prefer, whenever it is not attended by much difficulty and can be accomplished without violence, to draw down the uterus before dividing the cervix.† This is to be accomplished by means of hooked forceps inserted into the neck of the womb, just as they are inserted into a polypus which we are about to extirpate, and the parts may be divided by strong probe-pointed scissors, curved in the direction of their shank, not in that of their cutting edge, as is the case with Osiander's scissors, which have been much used for this purpose. The position in which the patient is placed is that usually adopted for lithotomy; but Dr. Simpson‡ recommends that she be placed on her face, with the legs hanging over the edge of the couch, as in operations for hæmorrhoids. The reason which he assigns for it is a weighty one, and is probably the same as induced Lisfranc to cut from behind forwards§—namely, that as the peritoneum descends much further behind the neck of the womb than in front of it, there is much more risk of wounding it in an incision

* For a description and drawing of this instrument, see Meig's Translation of Colombat's work on *Diseases of Women*, 8vo, Philadelphia, 1845, p. 351.

† Dr. Mayer, of Berlin in his very valuable paper in the *Verhandl. d. Gesellsch. f. Geburtsh.* vol. iv. p. 111, gives unqualified preference to the operation with the scissors, without displacement of the uterus.

‡ *Obstetric Memoirs*, p. 180.

§ Pauly, *op. cit.*, p. 473, asserts that hæmorrhage proved fatal within twenty-four hours to three out of nine cases, in which he assisted M. Lisfranc. Such a result, however, is quite out of proportion to the general experience in this matter.

carried from before backwards than if it were made in the opposite direction. I should imagine, however, that if this danger is borne in mind, it will not be difficult to avoid it without placing the patient in this very constrained attitude, which, among other inconveniences, has that of preventing the safe administration of chloroform.

Though the hæmorrhage after the operation is sometimes very formidable, and has been known indeed in several instances to prove fatal, I am yet disposed to think that the actual risk to life from loss of blood has been over-estimated, and that the danger of the supervention of phlebitis or inflammation of the peritoneum, is in reality the more serious. Something of the risk of bleeding, too, may be referred to the inefficient way in which the simple operation of plugging the vagina is not infrequently performed. Except during labour, it cannot be thoroughly done without the use of the speculum. The comparatively narrow vulva and entrance of the vagina render the introduction of the tow or cotton wool a very tedious process; and the lower part of the canal is already filled, while its wider and extensile upper portion is so little distended that ample room is left for the accumulation of a large quantity of blood between the uterus and the plug, until at length under some effort at vomiting or some sudden movement, an enormous coagulum and the plug are expelled together, and the bleeding breaks out afresh.

The question is not, however, whether the excision of the neck of the womb in these cases is unattended by immediate risk, but whether such risk is greater than would attend any other operation performed for the same purpose? That dread of hæmorrhage which has led some practitioners to prefer the ligature to the knife for the removal of polypi, has also had much influence in preventing the excision of the cervix, and has consequently led to the restriction of attempts at cure to those softer varieties of epithelial cancer in the removal of which, as of true cauliflower excrescence, the ligature is available. In the only case in which I saw the ligature employed for this purpose,

the patient died of phlebitis; and Dr. E. Watson,* who has collected such scanty statistics as can be brought to bear on the subject, gives the following result of his inquiries. Of seven patients operated on by ligature, one died four months after of inflammation of the womb, which threatened to prove immediately fatal, and probably would have done so but for the removal of the ligature on the sixth day after its application. In every one of the others the disease speedily reappeared, but the life of one of the number was saved by the excision of the remainder of the cervix, an operation which was performed by Dr. Montgomery, of Dublin. Of nine patients in whom the cervix uteri was excised, none died from the immediate effects of the operation; the disease returned in three; in five the cure was permanent; and the condition of one patient was doubtful, since her history was not brought down later than the eleventh day. Excision of the part seems to me the preferable proceeding, because it is applicable to cases where the ligature cannot be employed, because the present risk which attends it is, to say the least, not more considerable, while the prospect of a permanent cure is far greater.

The cases in which either of these proceedings is applicable, must obviously be comparatively few and exceptional; since the disease admits of being extirpated only when comparatively limited in extent, and at a comparatively early stage of its progress. Is there, then, no resource in these circumstances but to watch the daily advance of the evil; or can anything be done to retard, if not to cure, to alleviate the patient's sufferings, and to postpone for some weeks or months the inevitable result? Dr. James Arnott,† to whose ingenuity we owe many very important suggestions in medicine and surgery, believes and adduces evidence to show that by the systematic *application of a very low temperature* to parts affected with cancer, the pain of which they are the seat may be greatly diminished, the advance of the disease

* *Monthly Journal*, Nov., 1849, p. 1183.

† *On the Treatment of Cancer by the regulated application of an anæsthetic temperature*, 8vo, London, 1851.

may be considerably retarded, and ulcerations of their surface may even be made to assume a comparatively healthy character. Practical difficulties in the way of applying the freezing mixtures so often as might be desirable, have interfered with the trial of his plans upon a large scale in our hospitals, while some degree of disappointment has been experienced in consequence of the proved inadequacy of cold to annul the pain of surgical operations in other than a very few instances, and those of the very simplest kind. Notwithstanding a very kind letter of explanation which Dr. Arnott was so good as to send to me, I have yet found very great difficulties in the attempt at employing freezing mixtures in cases of uterine carcinoma. The necessary removal from bed to a couch, the discomfort of the position, the almost impossibility of preventing the patient's person from becoming wet, and the tenderness of the vagina and external parts produced by the frequent introduction of a large speculum, which even when of great size seldom embraces the hypertrophied cervix completely, have precluded my making such a number of trials of the agent as would alone warrant me in speaking with any measure of confidence as to its powers.

Other agents, more potent, and more easily applied, have been used in cases of uterine cancer, but with results so indecisive that opinion is still much divided with reference to the propriety of their employment. In coming to a conclusion with reference to the use of any of these remedies, the object with which in each instance it has been had recourse to must not be lost sight of. I have already mentioned, that a strong solution of nitrate of silver applied to a cancer of the womb, in some stages of the disease, both diminishes the excessive foetor of the discharge, and also expedites the separation of sloughs from its surface, aiding in this manner the attempts at a cure, which, though abortive as far as permanent recovery is concerned, are yet most welcome pauses in the course of the disease. For this purpose, I believe a strong solution is of greater service than the solid nitrate of silver, probably because in this form the remedy penetrates more thoroughly into the affected tissue. I have also sometimes

employed the acid nitrate of mercury to check those granulations which in cases of uterine cancer not infrequently sprout from the interior of the cervix, and I think that in both of these ways the *use of caustics* has been advantageous as a palliative, not as a curative proceeding.

There are some forms of external carcinoma, in which the employment of the more powerful escharotics, as the chloride of zinc, has been of great service; but I need scarcely remind you that the success of such a measure has depended almost entirely on the possibility of completely destroying the affected tissue, and that as a general rule, its partial destruction has been followed by a more rapid development of the disease than before. Now, in the case of the uterus, it is obvious that the thorough application of any deliquescent substance is impossible; that the risk of injuring adjacent parts must lead to the inefficient employment of the caustic, and consequently to the aggravation instead of the amendment of the disease. This circumstance leaves us no alternative but to resort to the *actual cautery* in any case in which it is intended to do more than modify the state of the surface of the affected parts. The idea of the operation is much more formidable than its reality, for it is not very painful in itself, while it can always be performed under chloroform; and the only real danger attending it, that of injuring adjacent tissues by the radiation of the heat, can always be effectually guarded against by the use of a box-wood speculum.

I have not myself used it, or seen it used sufficiently often to have formed a very decided opinion with reference to the amount of benefit which may be anticipated from it; but I feel satisfied that there is no danger to be apprehended in its employment, and that it does not tend to make matters worse. Generally there is a very decided, though often very temporary mitigation of the patient's previous sufferings, an improvement which has seldom outlasted the separation of the eschar. A diminution in the quantity and fœtor of the discharge has generally continued for a longer time, but I cannot say that as yet I have been able to attribute to it any delay in the progress of the evil, partly,

perhaps, from not having repeated it sufficiently often, and in still greater measure probably from the disease being already far advanced when the patients first came under my care. I believe, however, that like other proceedings intended to effect the real cure of cancer, the actual cautery is seldom indicated except in cases of the epithelial form of carcinoma, for in that alone is the mischief at all likely to be confined within limits which we can hope to reach by any local treatment.

These remarks are, I know, any thing but detailed enough to furnish a safe and sufficient guide as to when and how, and how often, this kind of interference is likely to be useful, or may even by good fortune prove actually curative. They are merely suggestive of the direction which your observations should take, and in which your efforts should be made. Your duty and mine is, not to sit down in apathetic indifference, doing nothing, trying nothing for a patient's cure, because her disease is one which hitherto has proved almost invariably mortal; but rather, patiently, carefully, with much mistrust of our own powers, much watchful scrutiny of our own motives, to apply ourselves to the trial of every means by which suffering may be mitigated or life prolonged. To this our common humanity prompts, our obligations as medical men compel us. It is to misinterpret both very grievously, if we not merely content ourselves with doing nothing, but take shelter under noisy censure of the conduct, and uncharitable construction of the motives, of those who read their duty differently.

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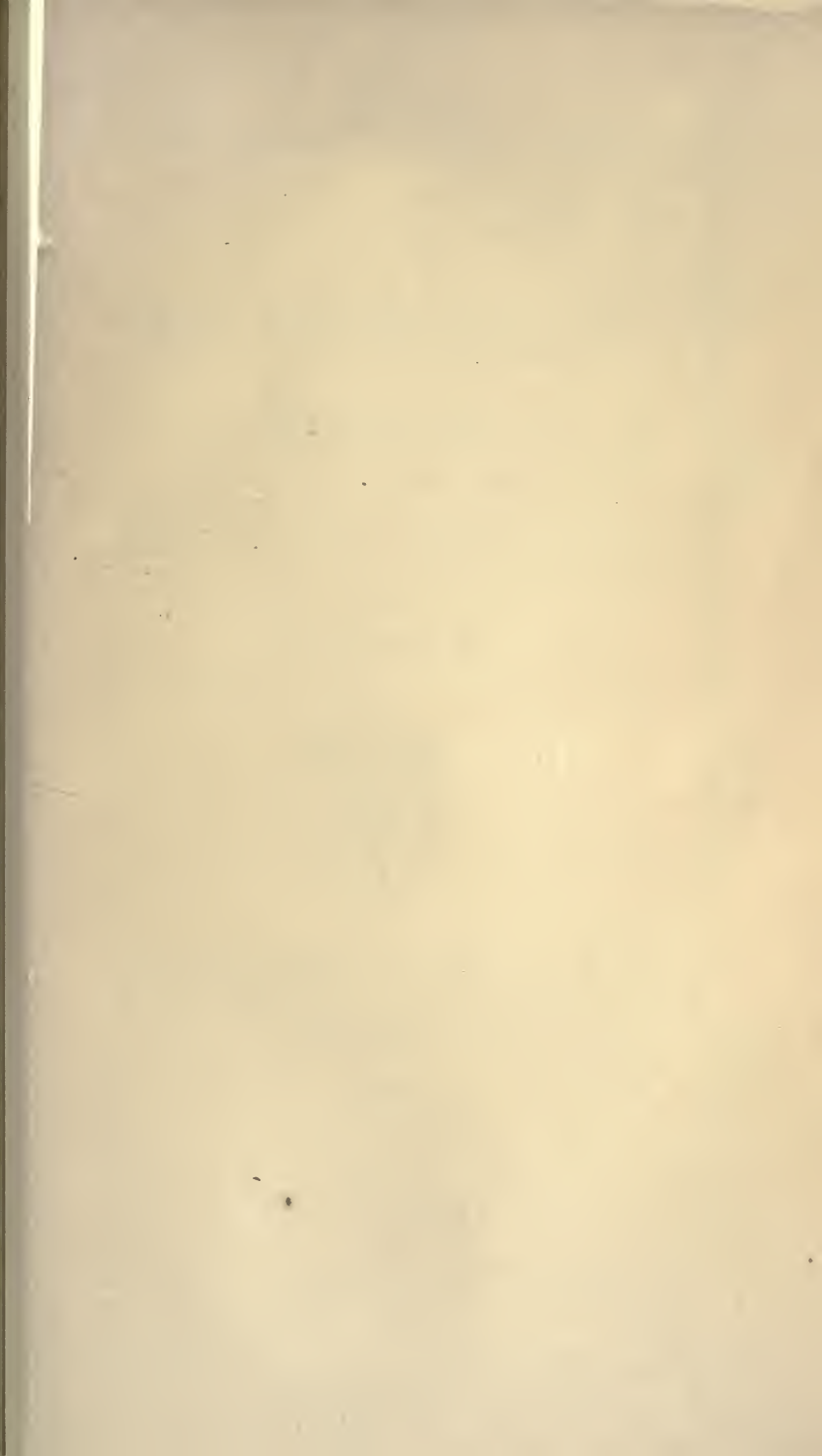
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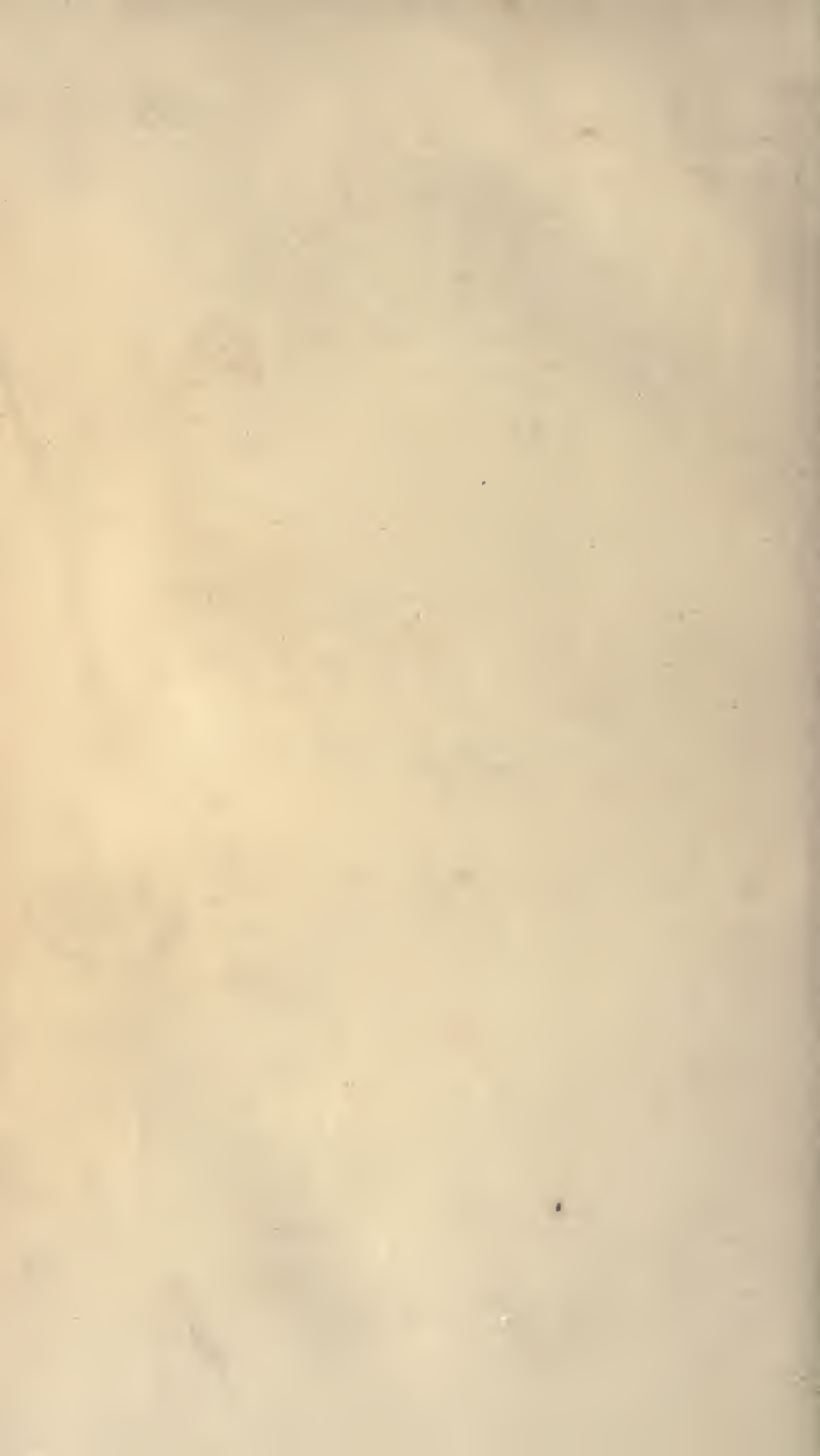
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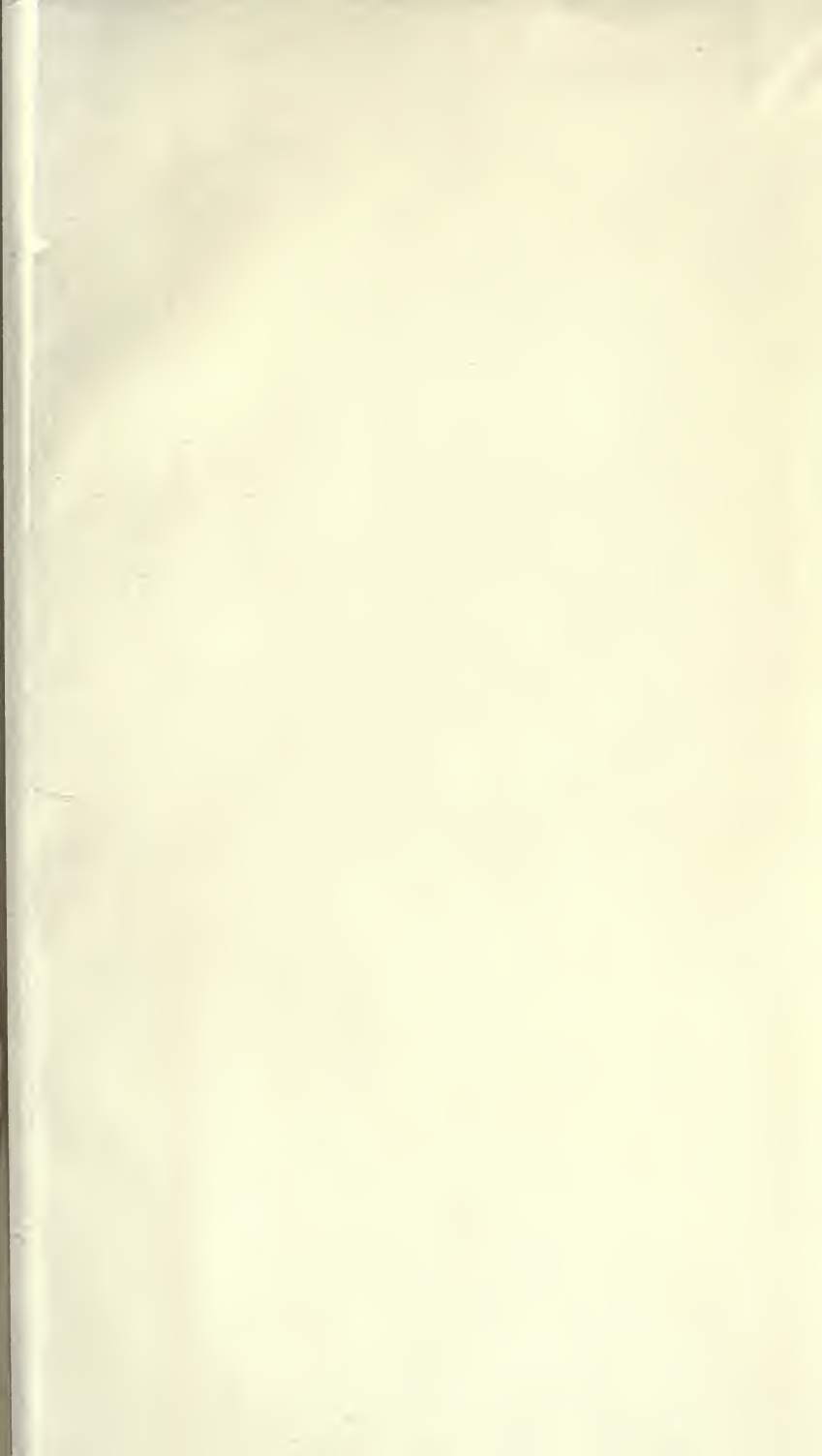
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